automotive
mannesmann
VDO

CD Car Radio **22RC670/00, 22RC660/00**
CD Car Radio **22RC620/00, 22RC610/00**
Cassette Car Radio **22ARC530/00, 22ARC520/00**
Cassette Car Radio **22ARC430/00, 22ARC420/00**

Service Manual

ARC430/420
For repair information of the cassette deck see Service Manual of Auto cassette deck CDS36PS4.

ARC530/520
For repair information of the cassette deck see Service Manual of Auto cassette deck SCA-R 3.3/2 5355

RC670/660/620/610
For repair information of the CD player see Service Manual of CD mechanism CDM-M5/4.1. V29107

12 V

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3139 169 00040
PC S 101 786

Technical Specifications

General

Power Supply	:	10.5 - 16V
Quiescent Current (at 12.6V)	:	< 4.5mA
Fuse	:	10A

Radio

TUNING RANGE IN DIFFERENT "INIT" MODE

INIT MODE	BAND	FREQUENCY	GRIDS MANUAL/AUTO
EUROPE	FM	87.5 - 108MHz	50kHz/100kHz
	LW	144 - 288kHz	1kHz/1kHz
	MW	531 - 1629kHz	1kHz/9kHz step
AMERICA	FM	87.5 - 108MHz	100kHz/100kHz
LATAM	AM	530 - 1710kHz	1kHz/10kHz step
ASIA	FM	87.5 - 108MHz	50kHz/50kHz
	AM	531 - 1629kHz	1kHz/9kHz step

Aerial input impedence	:	75 ohm
IF-FM (1/2)	:	10.7MHz/72.2MHz
IF-AM(1/2)	:	10.7MHz/450kHz
a - 3dB	:	7±5µV
SDS (10 dB channel separation)	:	150uV ± 3dB
Stereo channel separation	:	> 21dB
FM sensitivity for 26dB S/N	:	< 4.5µV
MW sensitivity for 26dB S/N	:	< 30µV
LW sensitivity for 26dB S/N	:	< 38µV

Cassette Deck

Cassette mechanism	:	CDS36PS4
Number of tracks	:	2x2
Tape speed	:	4.76 cm/second +3% -2%
Wow and Flutter	:	< 0.30%
Crosstalk	:	> 40dB

Cassette Deck

Cassette mechanism	:	SCA-R 3.3/2
Number of tracks	:	2x2
Tape speed	:	4.76 cm/second +3% -2%
Wow and Flutter	:	< 0.30%
Crosstalk	:	> 40dB

CD player

CD mechanism	:	CDM-M5/4.1.
Frequency response	:	20Hz - 20kHz
Crosstalk	:	45dB

Amplifier

Output Power (D=10%)	:	4x16W ± 1dB/4ohm
Fader	:	50dB
Balance	:	50dB

ESD

WARNING

All IC's and many semiconductors are susceptible to electronic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you care connected to the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

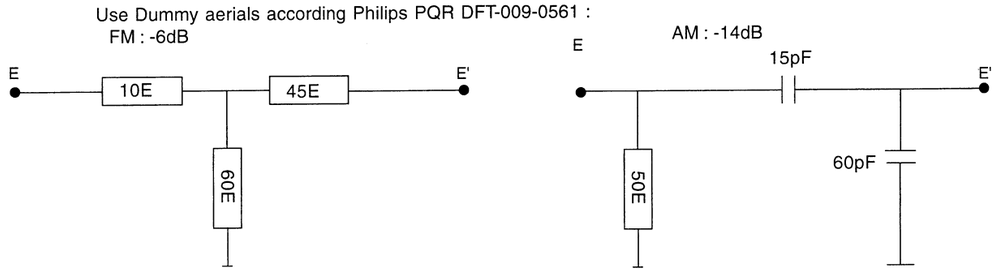
ESD Equipment:

Anti-static table mat	large 1200x650x1.25mm	4822 466 10953
	small 600x650x1.25mm	4822 466 10958
Anti-static wrist band		4822 395 10223
Connection box (1MOhm)		4822 320 11307
Extendible cable (to connect wrist band to conn. box)		4822 320 11305
Connecting cable (to connect table mat to conn. box)		4822 320 11306
Earth cable (to connect any product to mat or box)		4822 320 11308
Complete kit ESD3 (combining all above products)		4822 310 10671
Wristband tester		4822 344 13999

SERVICE HINTS

FM and AM search levels are stored in the EEprom. When you change the tuner module or the Eeprom, in order not to affect the performance of the set, you will need to reprogramme the FM and AM search levels using this service routine.

Make sure that you connect the following 75E FM and AM dummy antenna matching unit before reprogramming the search levels.



FM SEARCH LEVEL ALIGNMENT :

1. Input signal as below for LO (Local) search level alignment via the FM Dummy antenna:
   LO SEARCH LEVEL : FM 93MHz, E= 240uV
2. Tune in and store 93.0MHz into Preset 1 on BAND FM3.
3. Switch off the set.
4. Press and hold both "BAND" and "AST" key while turning on the set.
   Display shows : "93.0 000F"
5. Press Preset 1 for more than 2 seconds (you will hear a bleep) to store the LO (Local) search level.
6. Input signal as below for DX (Distance) search level alignment via the FM Dummy antenna:
   DX SEARCH LEVEL : FM 93.0MHz, E = 15uV
7. Press Preset 2 for more than 2 seconds (you will hear a bleep) to store the DX (Distance) search level
6. Press any key briefly (other than BAND) to exit this service routine.

AM SEARCH LEVEL ALIGNMENT :

1. Input signal as below for LO (Local) search level alignment via the AM Dummy antenna :
   LO SEARCH LEVEL : AM 531kHz, E= 350uV
2. Tune in and store 531kHz into Preset 1 on BAND AM1.
3. Switch off the set.
4. Press and hold both "BAND" and "AST" key while turning on the set.
5. Press BAND to change into AM1
   Display shows : "531 000F"
6. Press Preset 1 for more than 2 seconds (you will hear a bleep) to store the LO (Local) search level.
7. Input signal as below for DX (Distance) level alignment via the AM Dummy antenna :
   DX SEARCH LEVEL : AM 531kHz, E= 70uV
8. Press Preset 2 for more than 2 seconds (you will hear a bleep) to store the DX (Distance) search level.
9. Press any key briefly (other than BAND) to exit this service routine.

Service Test Mode :

Tuner reception check (Test mode)

Press Preset 2 and Preset 4 together to activate tuner test mode.
Display shows : " XXXX QRMF "
XXXX - 4 figures of tuned frequency
Q- Selected frequency quality
R- Best AF quality
M - Multipath
range 0 ... F hexadecimal
(0 = NO Multipath)
F- Field strength
range 0 ..... F hexadecimal
(F = Good signal strength)

Keyboard Test

This test is called by switching the set ON while keeping pressed the preset 3 key. A different number will apear each time you press a new key (e.g. Preset 3 corresponds to T03). This test can be exited at any moment by switching off the set.

LCD Display Test

Press Preset 1 and Preset 5 together to activate LCD display test. All segments of the LCD are lighted up.

Software release status

CHECKSUM FOR SOFTWARE RELEASE 1.0 :
Press Preset 1 and Preset 6 together to see the software release status

Display shows : "XXXX H"
XXXX = Checksum
H = Hexa. decimal

ADDITIONAL FUNCTION CHECK:

Item	Input	Output
External illumination +	Set off Inject +12V at pin A6	Power pilot light turns ON.
Auto Antenna	Connect a resistor of 25Ω from A5 to GND. Switch on set.	Voltage drop between pin A7 & A5 < 1V.
TEL MUTE	Connect 12 V at pin A1 Set init mode, option 'PHONE' select Choice 'HI".	Set is muted

POWER IGNITION CHECK :

Steps	Permanent (A4)	Ignition (A7)	Action	Observation
1	ON	ON	Turn set ON with power key.	Set is turn on.
2	ON	OFF	Switch OFF ignition	Set switches off.
			Remove detachable unit	Blinking LED will blink.
3	ON	ON	Switch ON ignition.	Set will be on.

TUNER CHECK:

This tuner module is a Non repairable module, complete spare parts as an module is readily available. For general check, please refer to the manual " General Check & Alignment procedures for Car Systems" 4822 725 25456. Use a matching circuit (artifical aerials) with Zi = 75ohm.

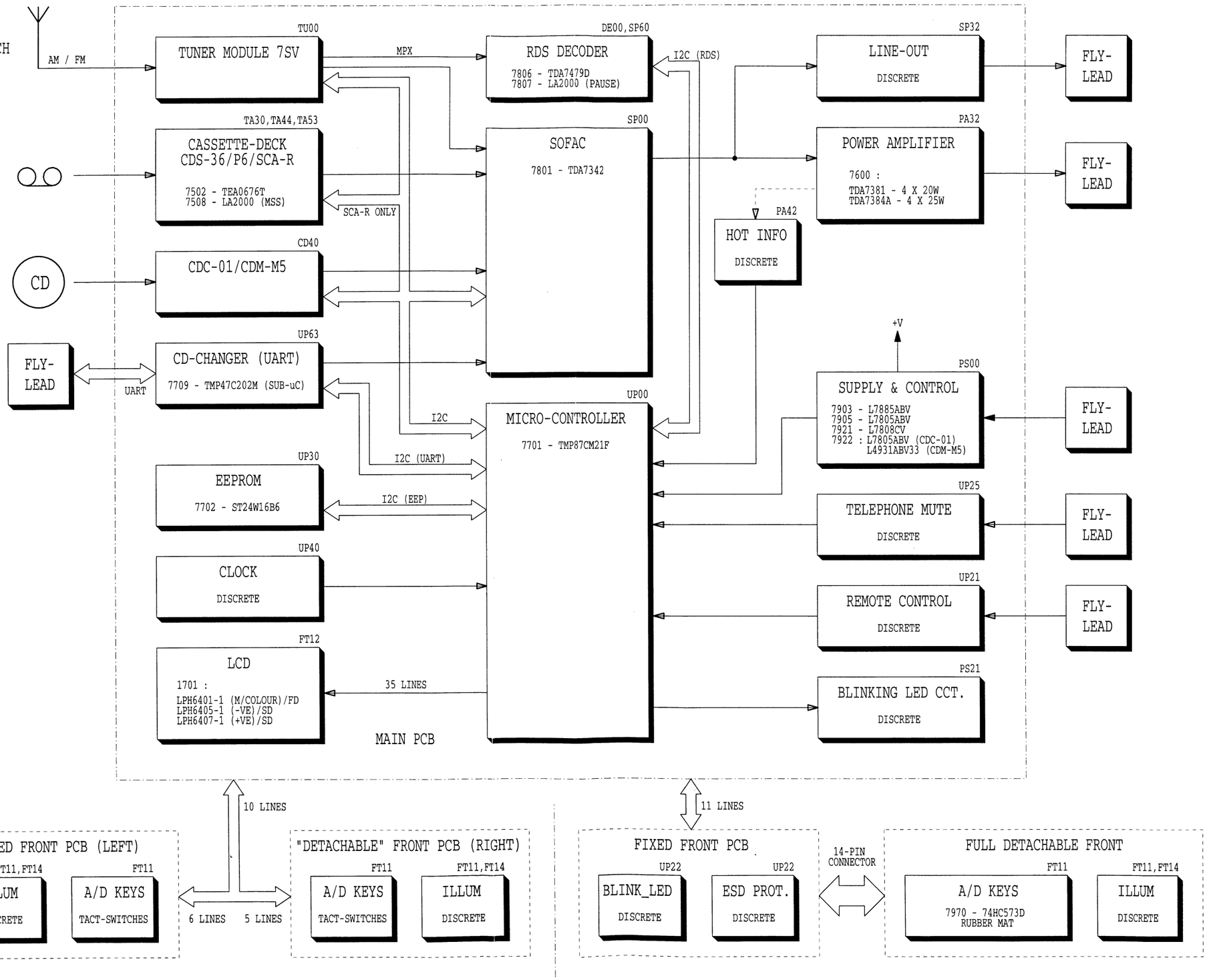
CHECK	TUNE IN	OUTPUT
α – 3 dB	FM 93MHz, 1mV, Dev=22.5kHz, f mod. = 1kHz FM 93MHz, 7uV, Dev=22.5kHz, f mod. = 1kHz	Conn. Block B3, B5 = 0dB (reference level) Conn. Block B3, B5 = -3dB
SDS 10dB talk	FM 93MHz, 1mV, Dev=22.5kHz, f mod. = 1kHz FM 93MHz, 150uV, Dev=22.5kHz, f mod. = 1kHz (L)	Conn. Block B3, B5 = 0dB (reference level) Cross- Conn. Block B3 = -10dB
Stereo Channel ration	FM 93MHz, 1mV, Dev=22.5kHz, f mod. = 1kHz FM 93MHz, 1mV, Dev=22.5kHz, f mod. = 1kHz (L)	Conn. Block B3, B5 = 0dB (reference level) sepa- Conn. Block B3 ≤ -21dB
26dB SNR	FM 93MHz, 4.5uV, Dev=22.5kHz, f mod. = 1kHz FM 93MHz, 4.5uV, Dev=22.5kHz, unmodulated	Conn. Block B3, B5 = 0dB (reference level) Conn. Block B3, B5 ≤ -26dB
FM Demodulated level	FM 93MHz, 1mV, Dev=22.5kHz, f mod. = 1kHz	Pin 10 of Tuner module 7SCV = 200mV (AC) ± 20mV Pin 15 of Tuner module 7SCV = 280mV (AC) ± 3dB
FM Search Sensitivity	FM 93MHz, unmodulated	DX : E < 20uV LO : E < 400uV
AM Demodulated level	AM 1053kHz, 1mV, m=30%, f mod. = 1kHz	AM_OUT of Tuner module 7SCV = 280mV (AC) ± 3dB
26dB SNR	MW 1053kHz, 30uV, m=30%, f mod. = 1kHz MW 1053kHz, 30uV, unmodulated	Conn. Block B3, B5 = 0dB (reference level) Conn. Block B3, B5 ≤ -26dB
26dB SNR	LW 207kHz, 38uV, m=30%, f mod. = 1kHz LW 207kHz, 38uV, unmodulated	Conn. Block B3, B5 = 0dB (reference level) Conn. Block B3, B5 ≤ -26dB
AM Search Sensitivity	AM 1053kHz, unmodulated	E = 14uV

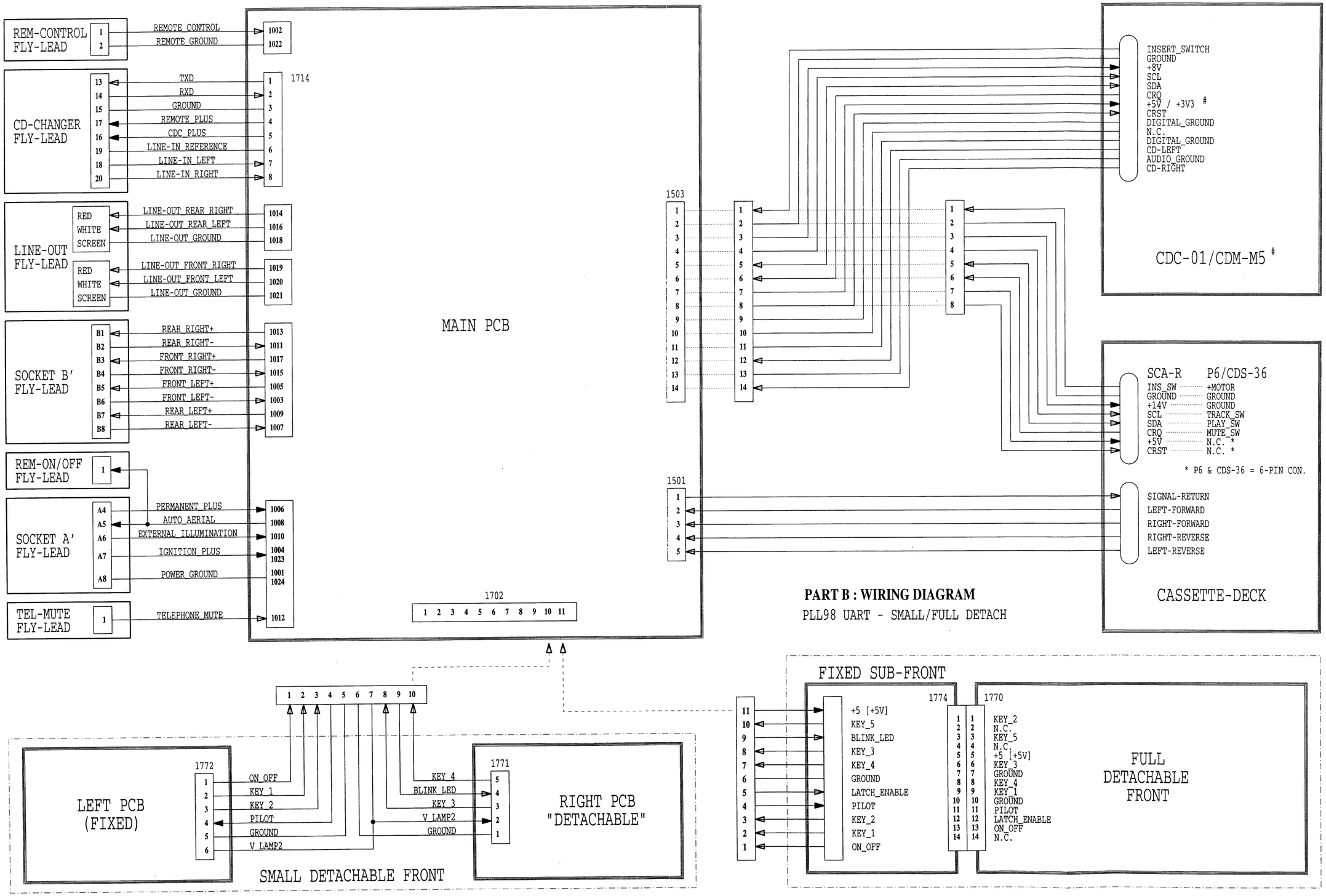
CLOCK ALIGNMENT :

Set T722 (EEP_SCL) TO GND and turn the set on to do clock alignment.

Signal	Test point	Frequency	Aligned with
CLK	(T108) Pin 20 of main uP	1024Hz	2705
GND	(T106) Power supply Gnd		

PART A :
ELECTRICAL ARCHITECTURE
PLL98 UART - SMALL/FULL DETACH




REM-CONTROL FLY-LEAD
1
2
REMOTE CONTROL
REMOTE GROUND
1002
1022
CD-CHANGER FLY-LEAD
13
14
15
17
16
19
18
20
TXD
RXD
GROUND
REMOTE PLUS
CDC PLUS
LINE-IN REFERENCE
LINE-IN LEFT
LINE-IN RIGHT
1
2
3
4
5
6
7
8
1714
LINE-OUT FLY-LEAD
RED
WHITE
SCREEN
LINE-OUT REAR RIGHT
LINE-OUT REAR LEFT
LINE-OUT GROUND
1014
1016
1018
RED
WHITE
SCREEN
LINE-OUT FRONT RIGHT
LINE-OUT FRONT LEFT
LINE-OUT GROUND
1019
1020
1021
SOCKET B' FLY-LEAD
B1
B2
B3
B4
B5
B6
B7
B8
REAR RIGHT+
REAR RIGHT-
FRONT RIGHT+
FRONT RIGHT-
FRONT LEFT+
FRONT LEFT-
REAR LEFT+
REAR LEFT-
1013
1011
1017
1015
1005
1003
1009
1007
REM-ON/OFF FLY-LEAD
1
SOCKET A' FLY-LEAD
A4
A5
A6
A7
A8
PERMANENT PLUS
AUTO AERIAL
EXTERNAL ILLUMINATION
IGNITION PLUS
POWER GROUND
1006
1008
1010
1004
1023
1001
1024
TEL-MUTE FLY-LEAD
1
TELEPHONE MUTE
1012
MAIN PCB
1702
1 2 3 4 5 6 7 8 9 10 11
1503
1501
INSERT_SWITCH
GROUND
+8V
SCL
SDA
CRQ
+5V / +3V3 #
CRST
DIGITAL_GROUND
N.C.
DIGITAL_GROUND
CD-LEFT
AUDIO_GROUND
CD-RIGHT
CDC-01/CDM-M5 #
SCA-R P6/CDS-36
INS_SW ····· +MOTOR
GROUND ····· GROUND
+14V ····· GROUND
SCL ····· TRACK_SW
SDA ····· PLAY_SW
CRQ ····· MUTE_SW
+5V ····· N.C. *
CRST ····· N.C. *
* P6 & CDS-36 = 6-PIN CON.
SIGNAL-RETURN
LEFT-FORWARD
RIGHT-FORWARD
RIGHT-REVERSE
LEFT-REVERSE
CASSETTE-DECK
PART B : WIRING DIAGRAM
PLL98 UART - SMALL/FULL DETACH
1 2 3 4 5 6 7 8 9 10
LEFT PCB (FIXED)
1772
ON_OFF
KEY_1
KEY_2
PILOT
GROUND
V_LAMP2
KEY_4
BLINK_LED
KEY_3
V_LAMP2
GROUND
1771
RIGHT PCB "DETACHABLE"
SMALL DETACHABLE FRONT
FIXED SUB-FRONT
+5 [+5V]
KEY_5
BLINK_LED
KEY_3
KEY_4
GROUND
LATCH_ENABLE
PILOT
KEY_2
KEY_1
ON_OFF
1774
1770
KEY_2
N.C.
KEY_5
N.C.
+5 [+5V]
KEY_3
GROUND
KEY_4
KEY_1
GROUND
PILOT
LATCH_ENABLE
ON_OFF
N.C.
FULL DETACHABLE FRONT

Voltage measured in FM mode

A4 = 14.4V
A7 = 14.4V
unless otherwise stated.

7806 TDA7479

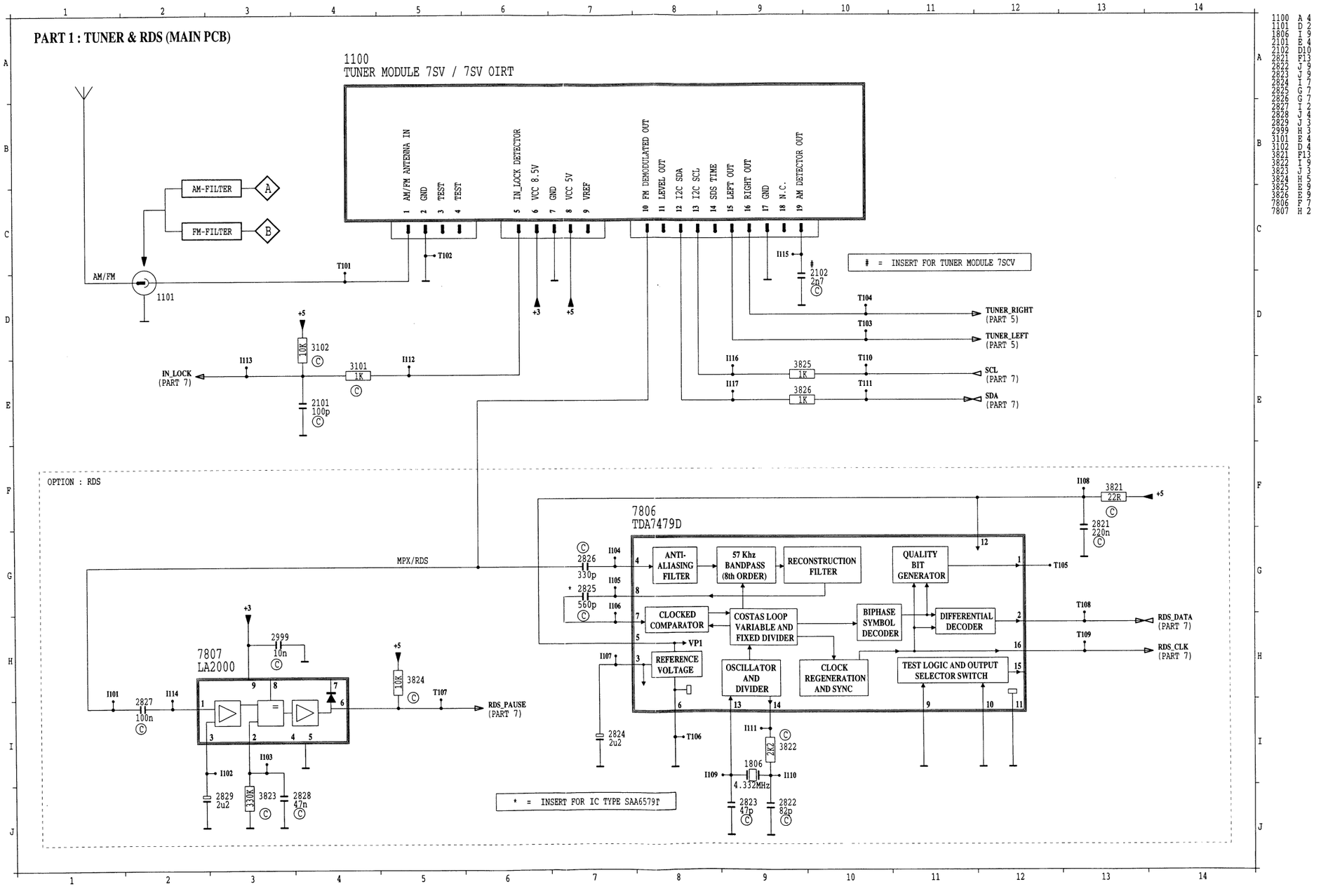
1	Square wave 5V
2	Square wave 5V
3	2.5V
4	Audio signal
5	5V
6	0V
7	Audio signal
8	Audio signal
9-11	0V
12	5V
13	Sine wave 0.6V
14	Sine wave 3.2V
15	N.C.
16	Square wave 5V

7807 LA200

1	Audio signal
2	8.2V
3	2.3V
4	N.C.
5	GND
6	5V
7-8	N.C.
9	8.5V

1100 TUNER IC96

1	AM/FM INPUT
2	GND
3	TEST
4	TEST
5	5V
6	8.5V
7	GND
8	5V
9	VREF
10	MPX/RDS
11	LEVEL OUT
12	I2C SDA
13	I2C SCL
14	SDS TIME
15	TUNER LEFT
16	TUNER RIGHT
17	GND
18	N.C.
19	AM DETECTOR OUT

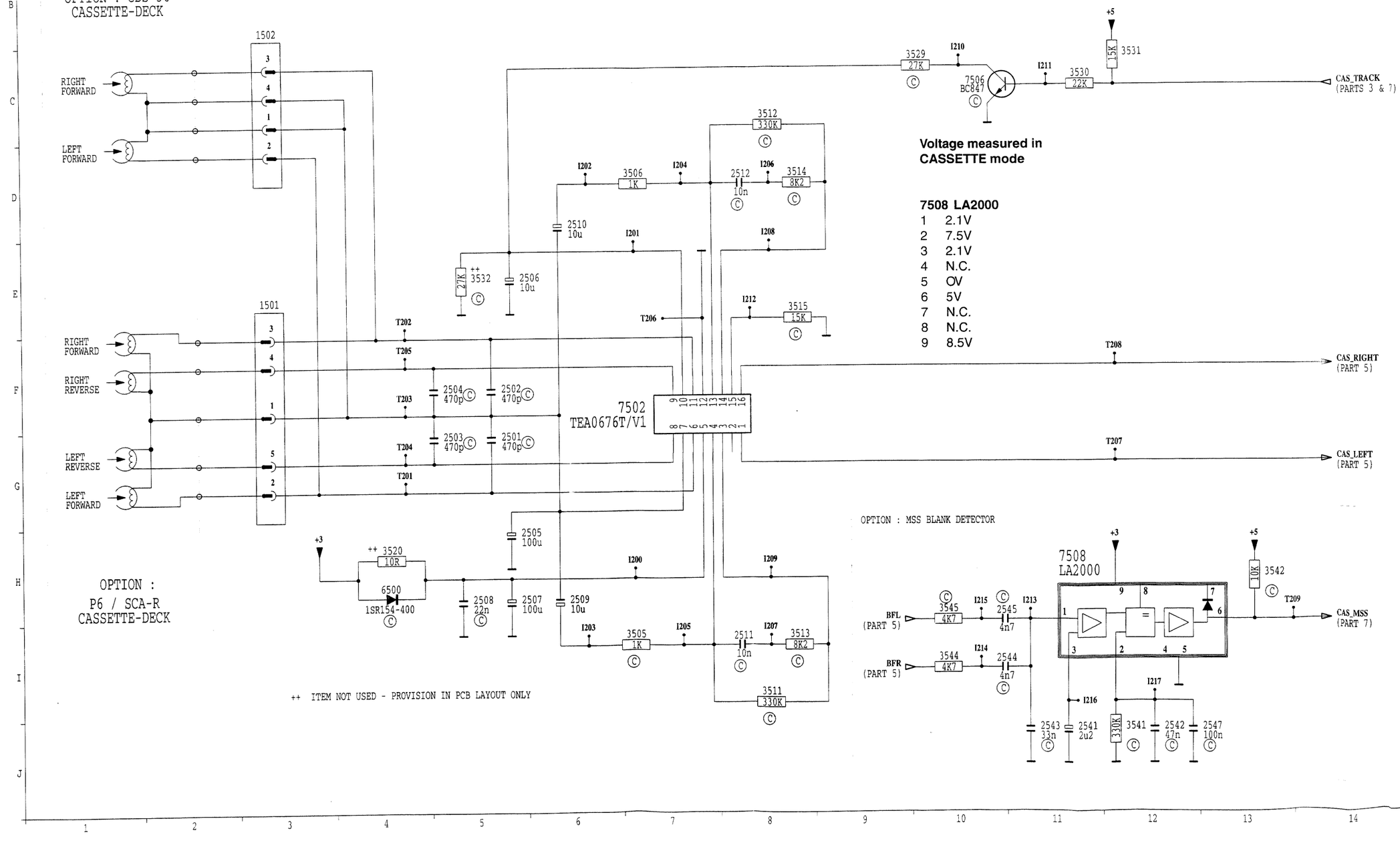


1100 A 4
1101 D 2
1806 I 9
2101 E 4
2102 D10
2821 F13
2822 J 9
2823 J 9
2824 I 7
2825 G 7
2826 G 7
2827 I 2
2828 J 4
2829 J 3
2999 H 2
3101 E 4
3102 D 4
3821 F13
3822 I 9
3823 J 5
3824 I 5
3825 E 9
3826 E 9
7806 F 7
7807 H 2

PART 2 : CASSETTE PRE-AMP, DOLBY & MSS (MAIN PCB)

THIS PART IS DELETED IN CD VERSIONS

OPTION : CDS-36
CASSETTE-DECK



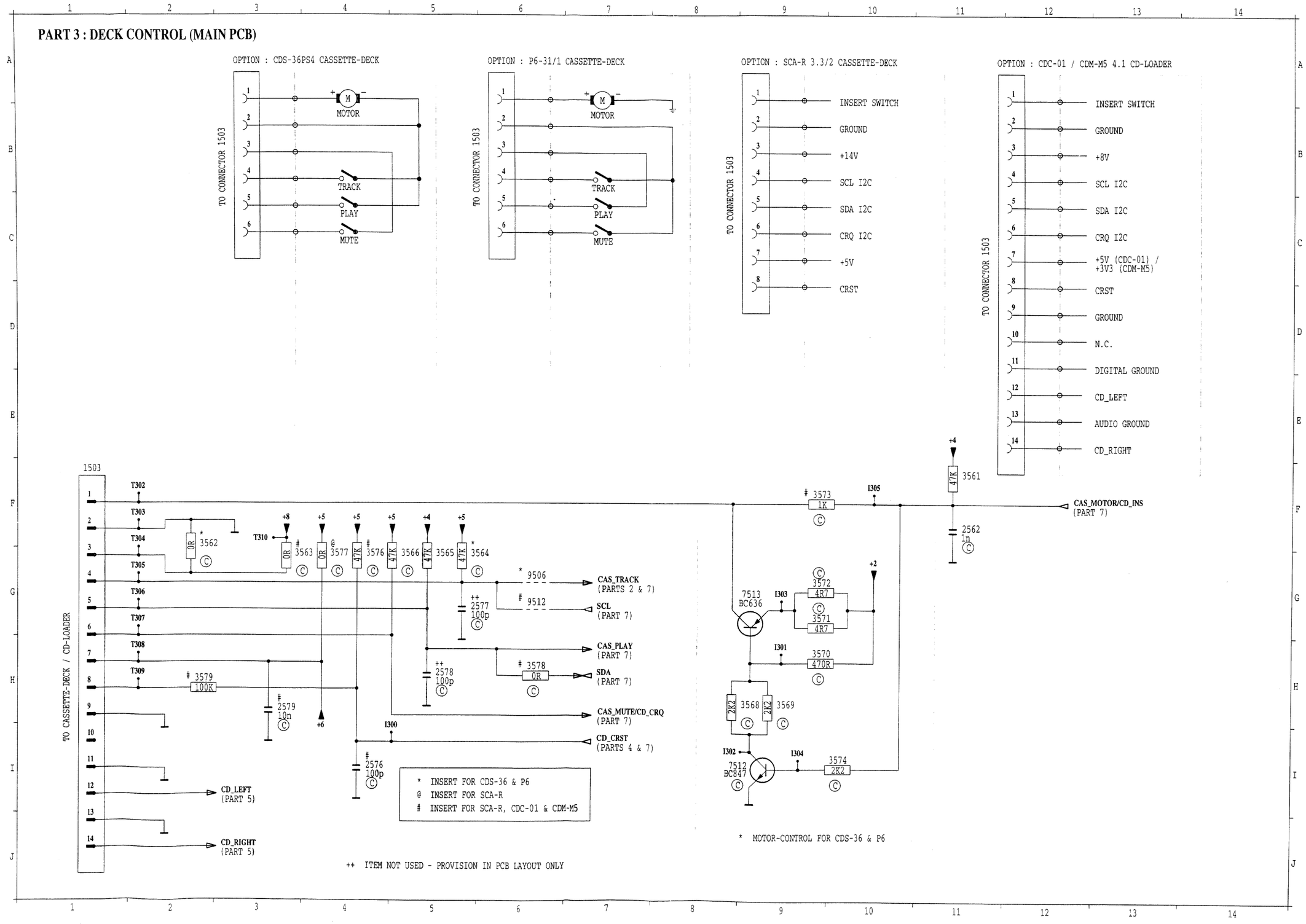
Voltage measured in CASSETTE mode

7508 LA2000

1	2.1V
2	7.5V
3	2.1V
4	N.C.
5	OV
6	5V
7	N.C.
8	N.C.
9	8.5V

1501 E 3
1502 B 3
2501 G 5
2502 F 5
2503 G 5
2504 F 5
2505 H 6
2506 E 6
2507 H 6
2508 H 5
2509 H 6
2510 D 6
2511 I 8
2512 J 8
2541 J11
2542 J12
2543 I11
2544 I10
2545 H10
2547 J13
3505 I 7
3506 D 7
3511 I 8
3512 C 8
3513 I 8
3514 D 8
3515 E 8
3520 H 4
3529 C10
3530 C11
3531 C12
3532 E 5
3541 J12
3542 H13
3544 I10
3545 H10
6500 H 4
7502 F 7
7506 C10
7508 H11

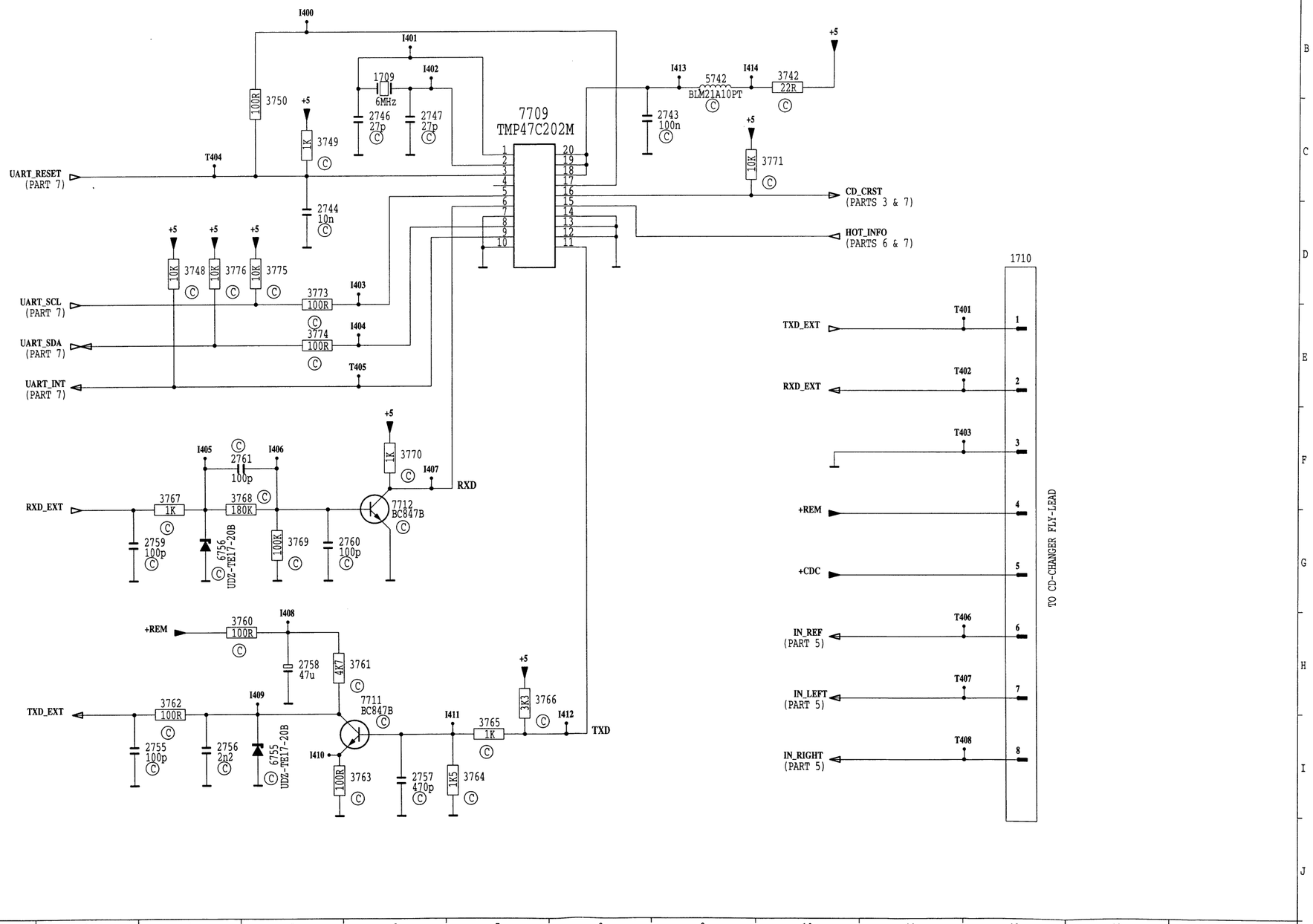
PART 3 : DECK CONTROL (MAIN PCB)



1503 F 1
2562 F11
2576 I 4
2577 G 6
2578 H 5
2579 H 3
3561 F11
3562 F 2
3563 G 4
3564 G 6
3565 G 5
3566 G 5
3568 H 9
3569 H 9
3570 H 9
3571 G 9
3572 G 9
3573 F 9
3574 I10
3576 G 4
3577 G 4
3578 H 6
3579 H 2
7512 I 9
7513 G 9
9506 G 6
9512 G 6

PART 4 : CD-CHANGER CONTROL / CDCC (MAIN PCB)

N.B. THIS PART IS AN OPTION.

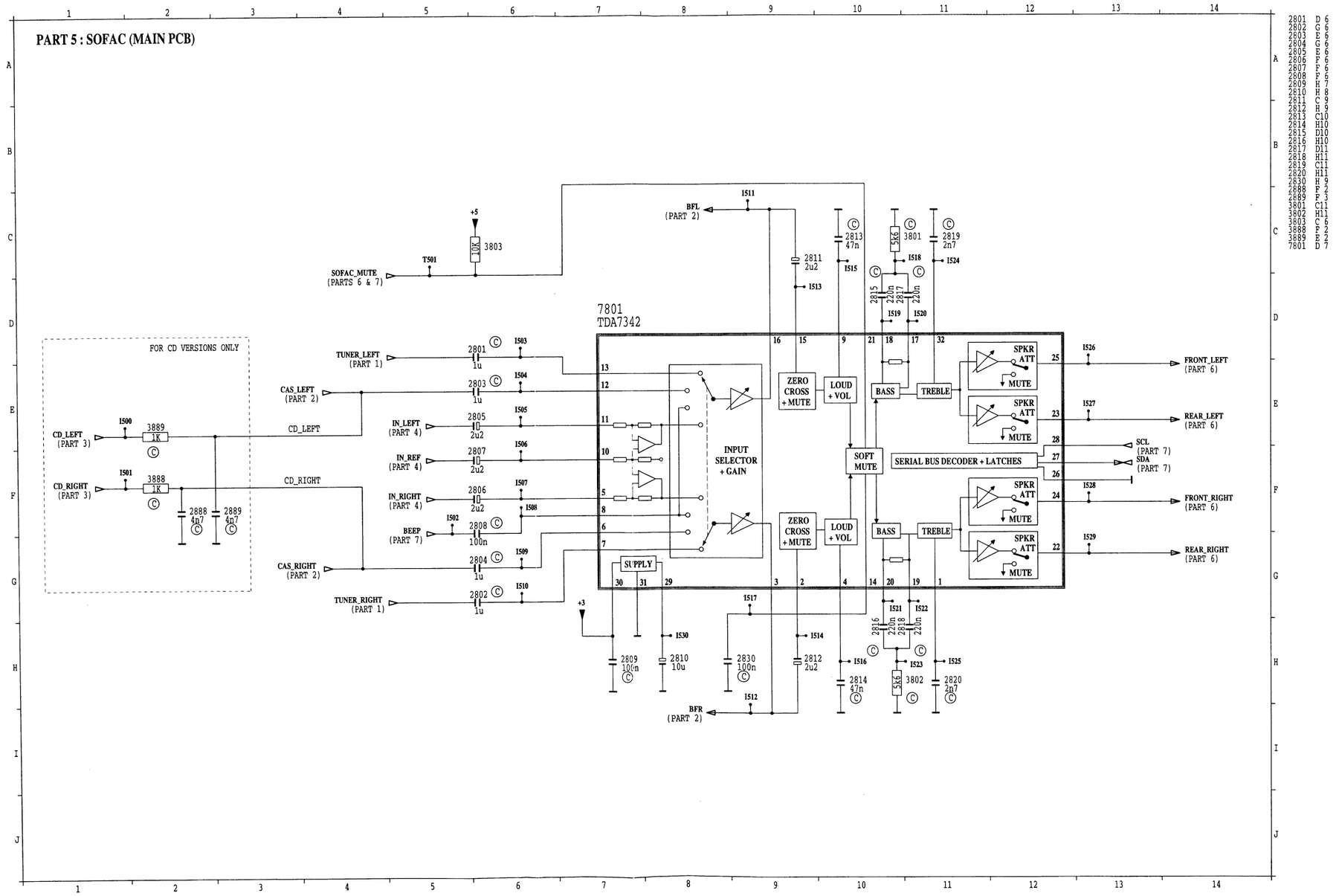


1709 B 6
1710 D12
2743 C 9
2744 D 5
2746 C 6
2747 C 6
2755 I 4
2756 I 4
2757 I 6
2758 H 5
2759 G 4
2760 G 6
2761 F 5
3742 B10
3748 D 4
3749 C 5
3750 C 5
3760 H 5
3761 H 6
3762 H 4
3763 I 6
3764 I 7
3765 I 7
3766 H 7
3767 F 4
3768 F 5
3769 G 5
3770 F 6
3771 C10
3773 D 5
3774 E 5
3775 D 5
3776 D 4
5742 B 9
6755 I 5
6756 G 4
7709 C 7
7711 H 6
7712 F 6

Voltage measured in FM mode
A4 = 14.4V
A7 = 14.4V
unless otherwise stated.

7801 TDA7342

1-8	4.3V
9-13	4.3V
14	7.5V
15-16	4.3V
17-20	4.3V
21	4.9V
22-25	3.6V
26	0V
27-28	5V
29	4.3V
30	8.5V
31	0V
32	4.3V



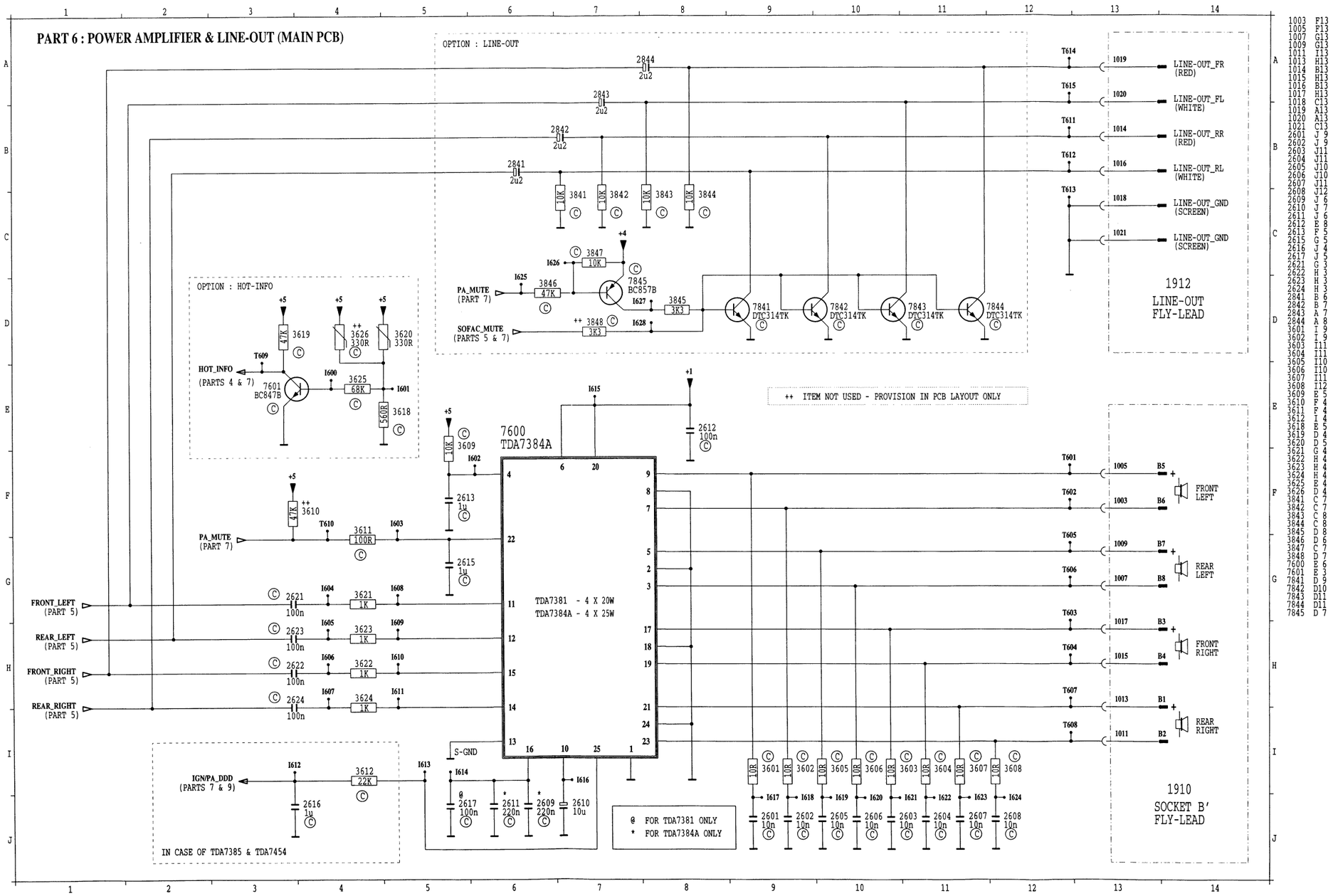
2801 D 6
2802 G 6
2803 E 6
2804 G 6
2805 E 6
2806 F 6
2807 F 6
2808 F 6
2809 H 7
2810 H 8
2811 C 9
2812 H 9
2813 C10
2814 H10
2815 D10
2816 H10
2817 D11
2818 H11
2819 C11
2820 H11
2830 H 9
2888 F 2
2889 F 3
3801 C11
3802 H11
3803 C 6
3888 F 2
3889 F 2
7801 D 7

Voltage measured in FM mode

A4 = 14.4V
A7 = 14.4V
unless otherwise stated.

7600 TDA7384A

1	0V
2	0V
3	7.3V
4	5V
5	7.3V
6	14.4V
7	7.3V
8	0V
9	7.3V
10	7.2V
11	7.1V
12	7.1V
13	0V
14	7.1V
15	7.1V
16	7.2V
17	7.3V
18	0V
19	7.3V
20	14.4V
21	7.3V
22	5V
23	7.3V
24	0V
25	0V



PART 7 : MICRO-CONTROLLER, LCD & EEPROM (MAIN PCB)

#	-VE LCD	+VE LCD
3709	AS SHOWN	6K8
3710	AS SHOWN	33K
9797	INSERT	DELETE
9798	DELETE	INSERT

1701 FD: LPH6401-1 (M/COLOUR)
SD: LPH6405-1 (-VE) / LPH6407-1 (+VE)

LCD DRIVER · P6 · P7 · P9

7701 TMP87CM21F

ALU · PSW · FLAGS · RBS · STACK POINTER · DATA MEMORY · REGISTER BANKS · PROGRAM COUNTER · PROGRAM MEMORY · INTERRUPT CONTROLLER · SYSTEM CONTROLLER · STANDBY CONTROLLER · TIMING GENERATOR · HIGH FR · LOW FR · CLOCK GENERATOR · TIME BASE TIMER · WATCHDOG TIMER · 16-BIT TIMER COUNTER · TC1 · TC2 · 8-BIT TIMER COUNTERS · TC3 · TC5 · SERIAL INTERFACES · SIO1 · SIO2 · INST. REGISTER · INST. DECODER

P2 · 8 BIT A/D CONV · P5 · P1 · P3 · P4

1703 CSTCS8MHz · 1704 32.768kHz · 2705 50p · 2704 33p · 2703 22p · INSERT FOR CLOCK · INSERT FOR NON-CLOCK · 2706 22n · 7702 ST24W16B6 · MEMORY · REGISTER · ADDRESS CTR · CONTROL LOGIC · REGISTER COMPARATOR · TEST · EEP_SDA · EEP_SCL

OPTION : TELEPHONE MUTE

OPTION : REMOTE CONTROL

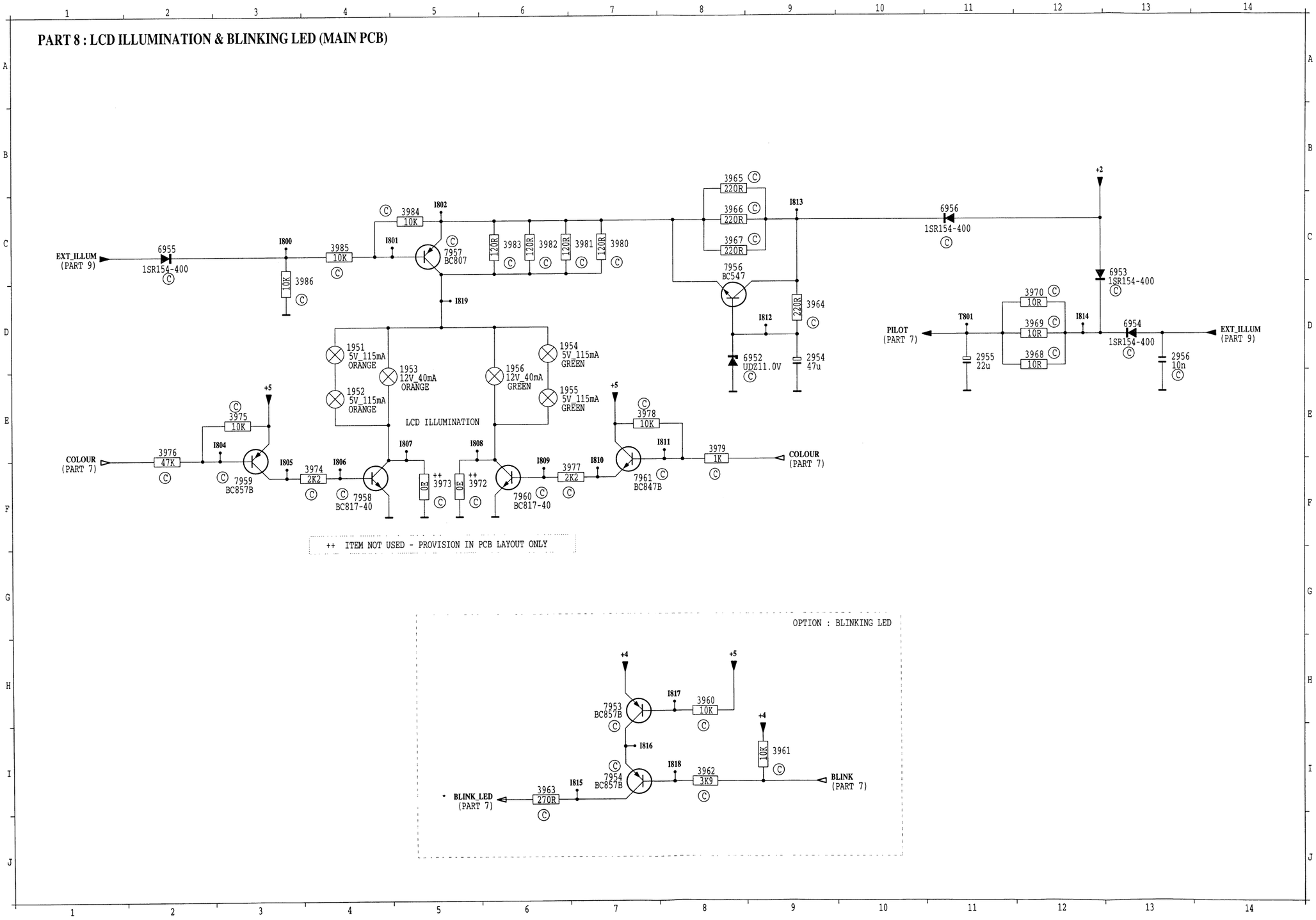
* 3718 VALUE CHANGED TO 180K FOR SETS WITH P6 CASSETTE-DECK

@ INSERT FOR SETS WITHOUT CD-CHANGER
++ ITEM NOT USED - PROVISION IN PCB LAYOUT ONLY

**	SMALL (SD) DETACH	FULL (FD) DETACH
2711	INSERT	DELETE
2712	INSERT	DELETE
2713	INSERT	DELETE
2714	INSERT	DELETE
2998	INSERT	DELETE
3711	AS SHOWN	330R
3712	AS SHOWN	330R
3713	AS SHOWN	330R
3714	AS SHOWN	330R
3715	AS SHOWN	56K
3716	AS SHOWN	56K
3717	AS SHOWN	56K
3718	AS SHOWN	56K
3726	DELETE	INSERT
3727	DELETE	INSERT
4700	INSERT	DELETE
4702	DELETE	INSERT
4704	DELETE	INSERT
4705	INSERT	DELETE

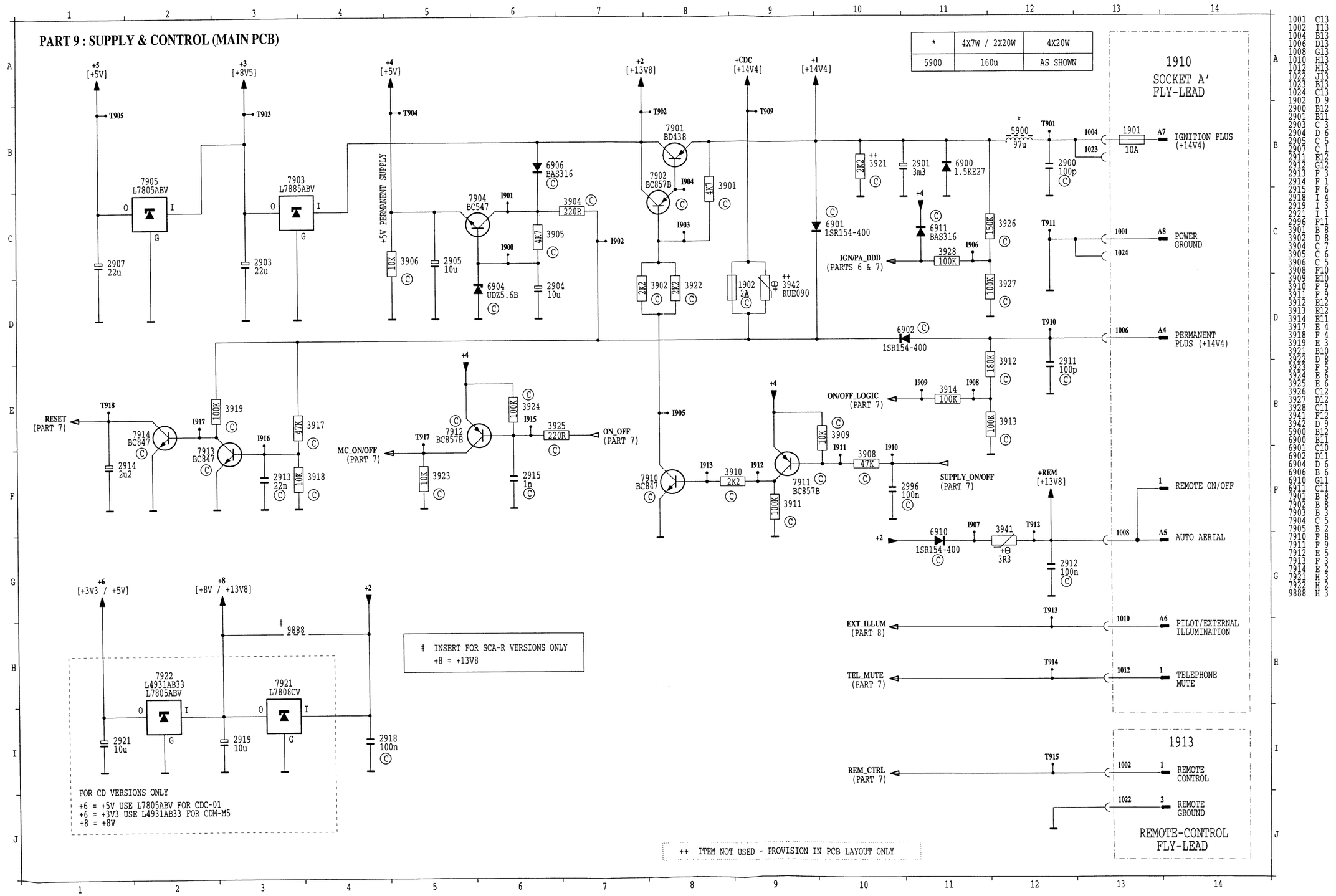
1701	A 3
1702	D14
1703	B 1
1704	F 2
2701	C 2
2702	G 3
2703	G 3
2704	G 2
2705	G 1
2706	I 1
2711	H10
2712	H10
2713	H 9
2714	H 9
2715	I 9
2721	C12
2751	D 9
2752	D11
2753	E 2
2997	C10
2998	H11
3701	I 4
3702	J 4
3703	J 5
3704	J 5
3705	J 2
3706	H 9
3707	G 3
3709	D 1
3710	C 1
3711	G10
3712	G10
3713	G10
3714	F 9
3715	F11
3716	F11
3717	F10
3718	F10
3719	I10
3721	B11
3722	C11
3723	B11
3724	B12
3726	F12
3727	H 2
3751	D 9
3752	D10
3753	D11
3754	D11
4700	H 2
4702	H 2
4704	D14
4705	F13
5701	C 1
6705	A12
6751	D10
7701	D 6
7702	I 2
7703	B10
9508	H 4
9797	C 1
9798	C 1
9945	G11
9957	H 4

PART 8 : LCD ILLUMINATION & BLINKING LED (MAIN PCB)



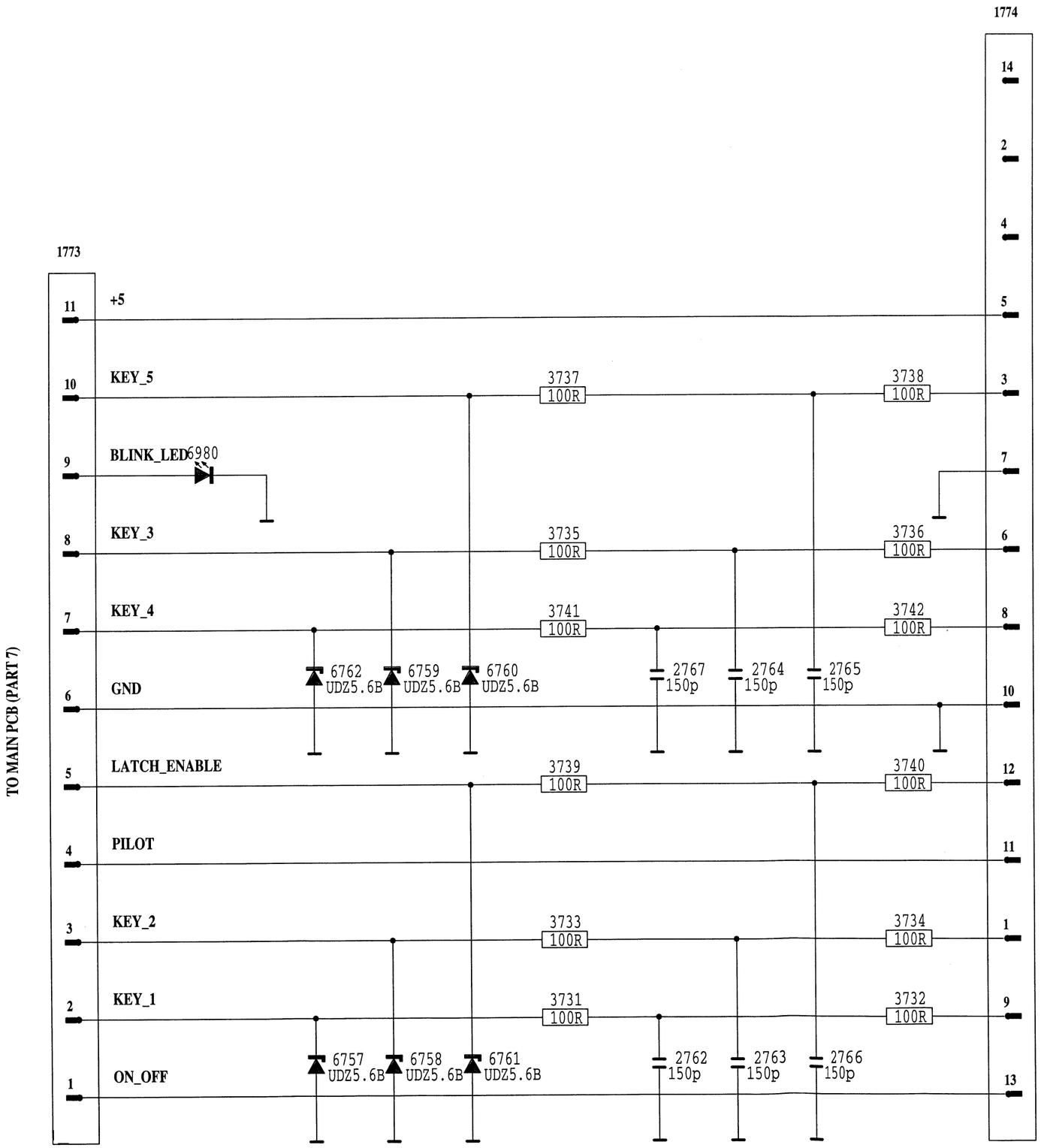
1951	D 4
1952	E 4
1953	D 5
1954	D 7
1955	E 7
1956	D 6
2954	D 9
2955	D11
2956	D13
3960	H 8
3961	I 9
3962	I 8
3963	I 6
3964	D 9
3965	B 8
3966	C 8
3967	C 8
3968	D12
3969	D12
3970	D12
3972	F 5
3973	F 5
3974	F 4
3975	E 3
3976	E 2
3977	F 7
3978	F 8
3979	C 7
3980	C 7
3981	C 7
3982	C 6
3983	C 6
3984	C 5
3985	C 4
3986	C 4
6952	D 9
6953	C13
6954	D13
6955	C 2
6956	C11
7953	H 7
7954	I 7
7956	C 8
7957	C 5
7958	F 4
7959	F 3
7960	F 6
7961	F 7

PART 9 : SUPPLY & CONTROL (MAIN PCB)



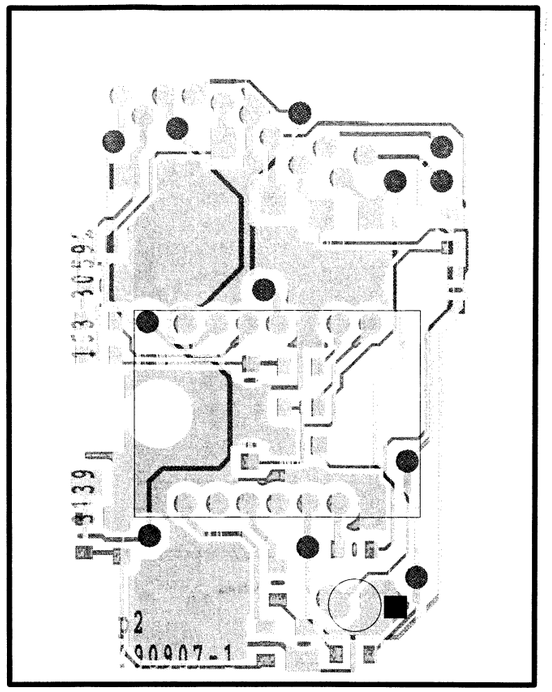
*	4X7W / 2X20W	4X20W
5900	160u	AS SHOWN

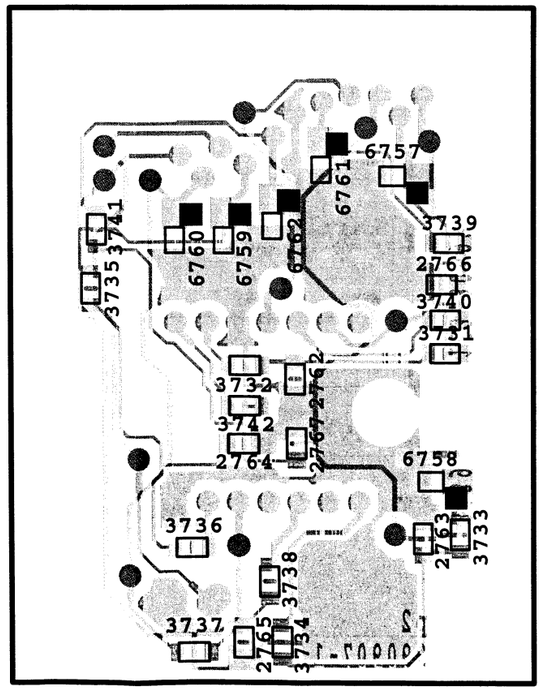
1001 C13
1002 I13
1004 B13
1006 D13
1008 G13
1010 H13
1012 H13
1022 J13
1023 B13
1024 C13
1902 D 9
2900 B12
2901 B11
2903 C 3
2904 D 6
2905 C 5
2907 C 1
2911 E12
2912 G12
2913 F 1
2914 F 1
2915 F 6
2918 I 4
2919 I 3
2921 I 1
2996 F11
3901 B 8
3902 D 8
3904 C 7
3905 C 6
3906 C 5
3908 F10
3909 F10
3910 F 9
3911 F 9
3912 B12
3913 B12
3914 B11
3917 B 4
3918 F 4
3919 B 3
3921 B10
3922 D 8
3923 F 5
3924 E 6
3925 E 6
3926 C12
3927 D12
3928 C11
3941 F12
3942 D 9
5900 B12
6900 B11
6901 C10
6902 D11
6904 D 6
6906 B 6
6910 G11
6911 C11
7901 B 8
7902 B 8
7903 B 3
7904 C 5
7905 B 2
7910 F 8
7911 F 9
7912 E 5
7913 F 3
7914 E 2
7921 H 3
7922 H 2
9888 H 3



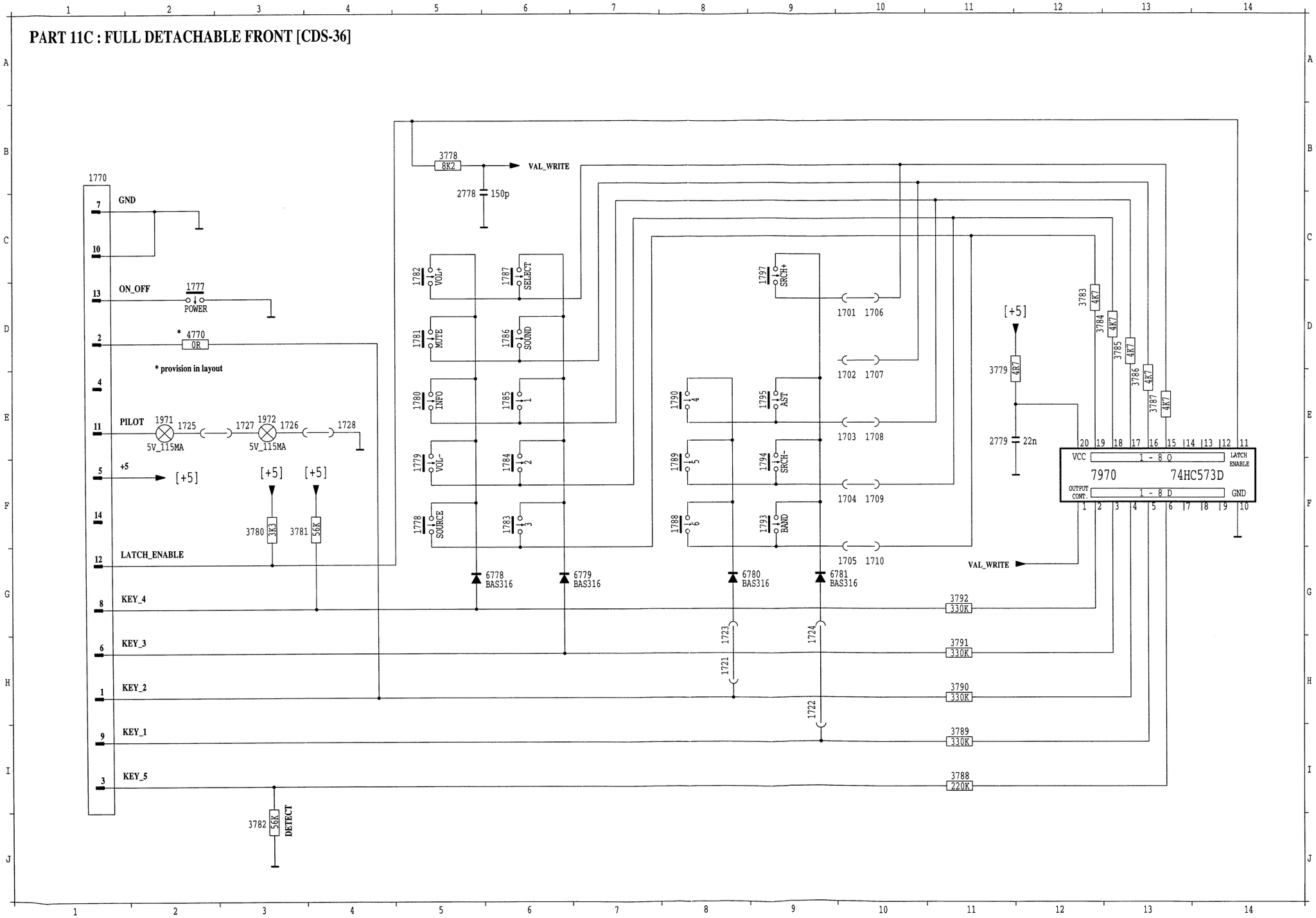
TO MAIN PCB (PART 7)

TO FRONT PCB (PART 11)



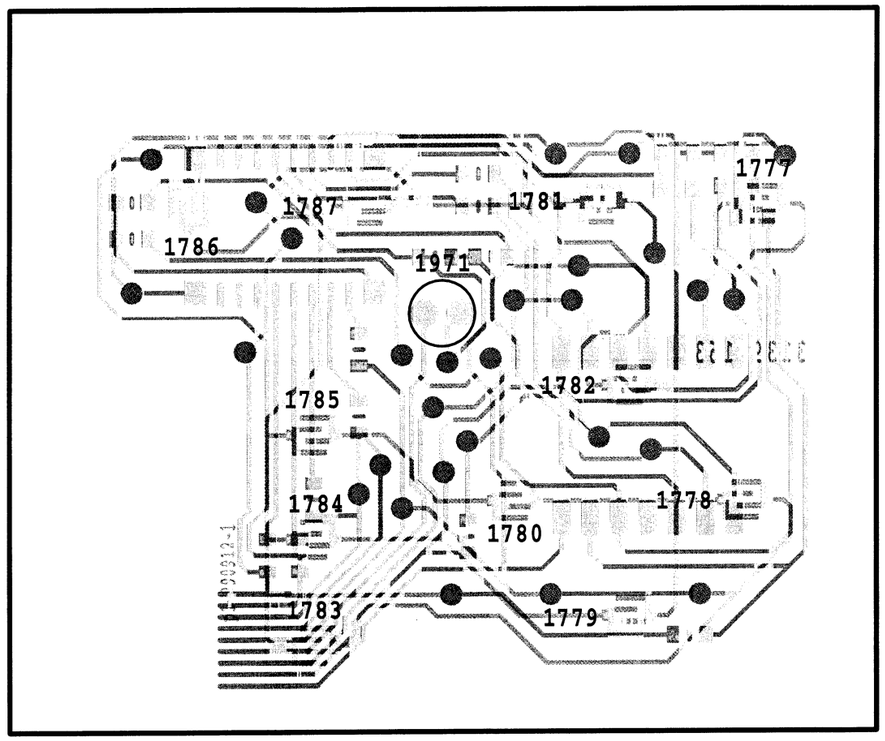


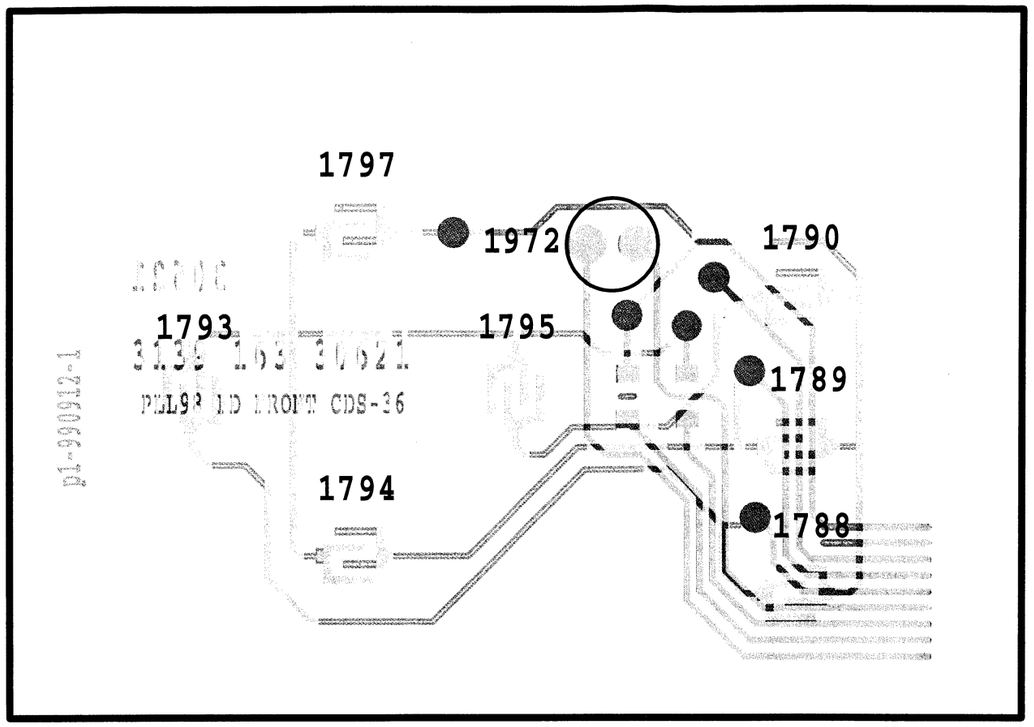
PART 11C : FULL DETACHABLE FRONT [CDS-36]

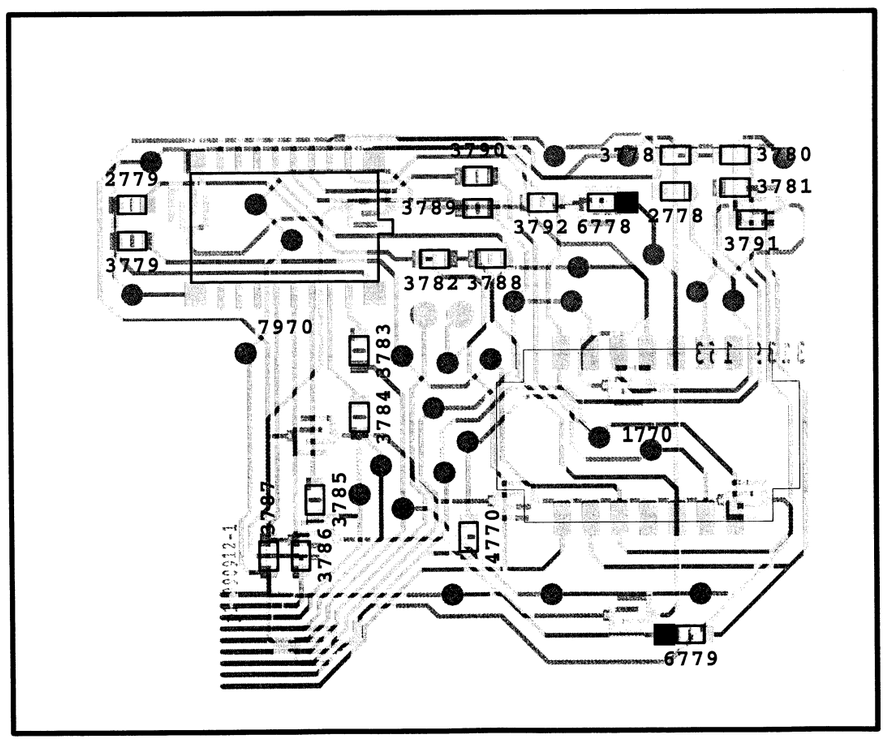


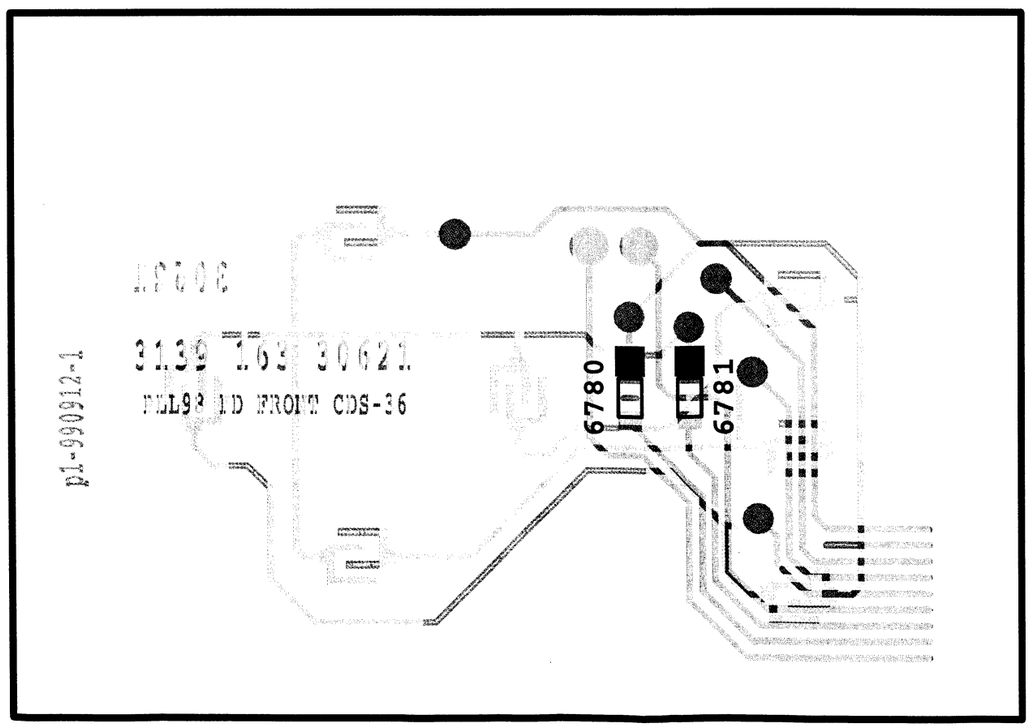
1701 D10
1702 E10
1703 B10
1704 F10
1705 G10
1706 D10
1707 E10
1708 E10
1709 F10
1710 G10
1721 H 8
1722 H 9
1723 H 8
1724 H 9
1725 B 2
1726 B 3
1727 B 3
1728 B 4
1770 B 1
1777 D 2
1778 D 5
1779 E 5
1780 E 5
1781 D 5
1782 C 5
1783 F 6
1784 F 6
1785 E 6
1786 D 6
1787 C 6
1788 F 8
1789 F 8
1790 E 8
1793 F 9
1794 F 9
1795 E 9
1797 C 9
1971 E 2
1972 B 3
2778 C 5
2779 E11
3778 B 5
3779 E11
3780 F 3
3781 F 3
3782 J 3
3783 D12
3784 D13
3785 D13
3786 E13
3787 E13
3788 I11
3789 I11
3790 H11
3791 H11
3792 G11
4770 D 2
6778 G 6
6779 G 7
6780 G 9
6781 G10
7970 F12

FRONT PCB (CDS-36)

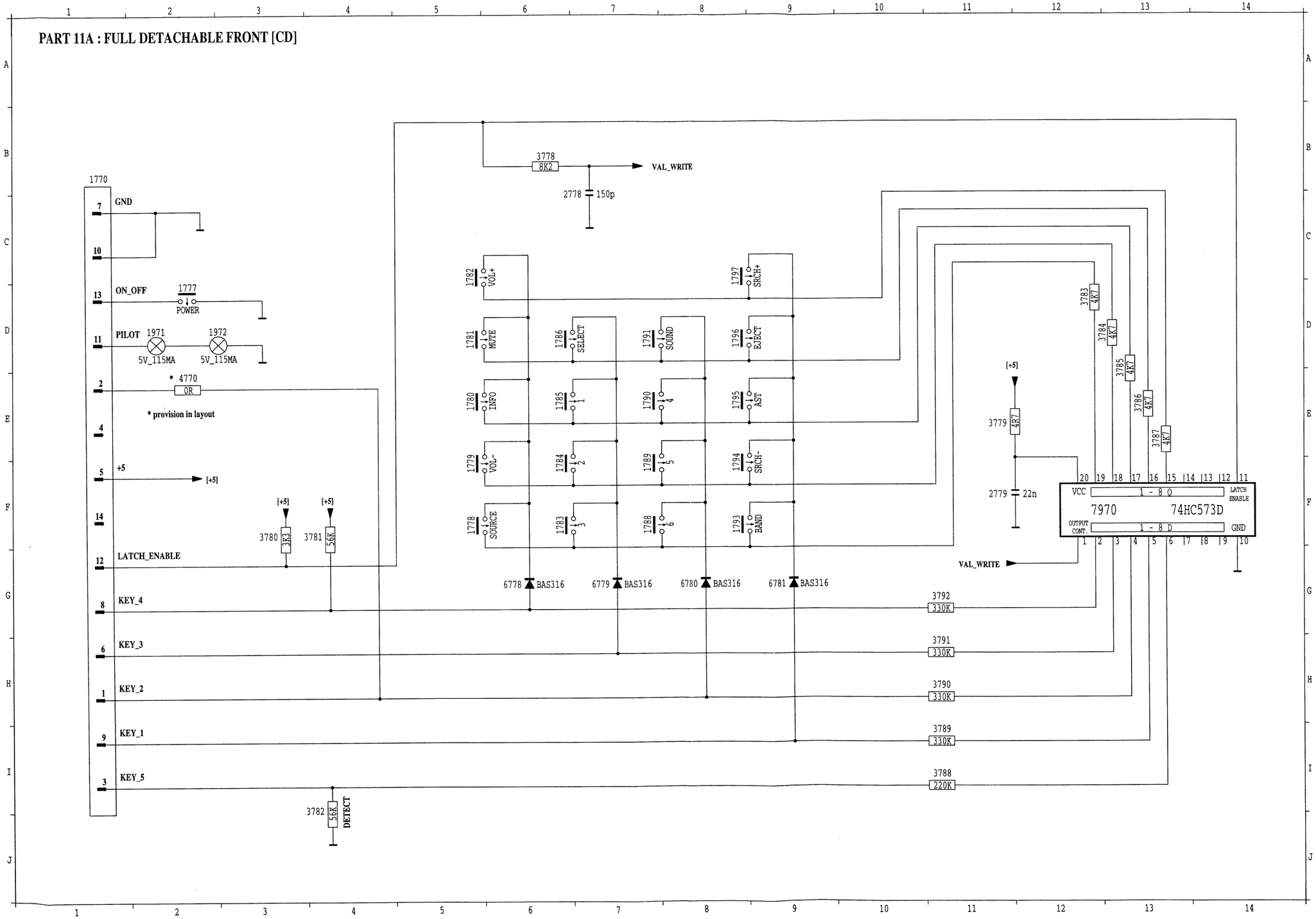






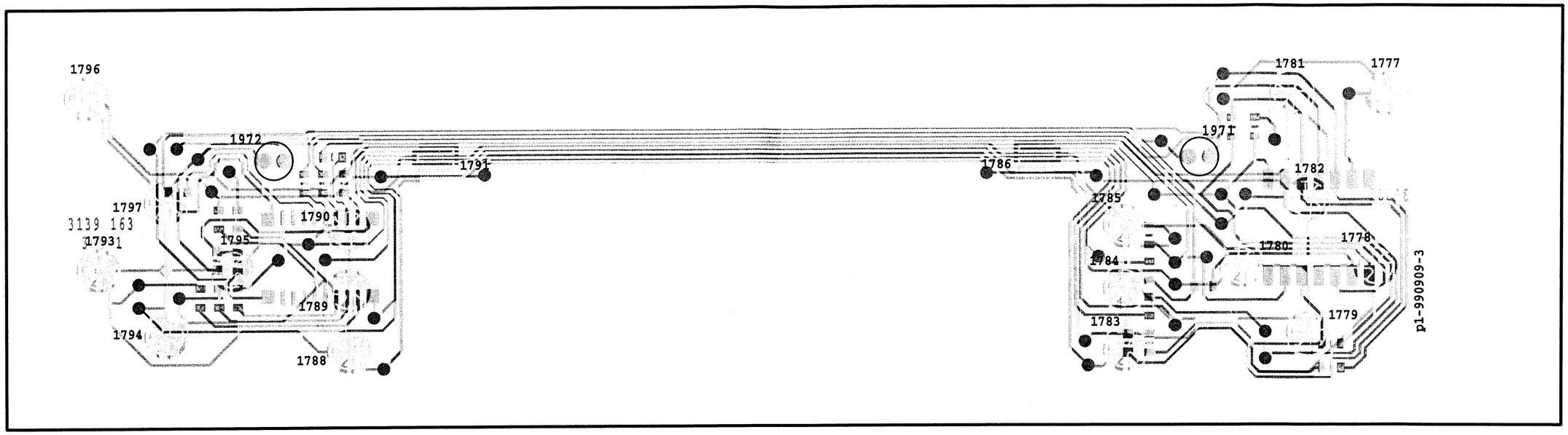


PART 11A : FULL DETACHABLE FRONT [CD]



1770 B 1
1777 D 2
1778 F 5
1779 F 5
1780 E 5
1781 D 5
1782 C 5
1783 F 6
1784 F 6
1785 E 6
1786 D 6
1788 F 7
1789 F 7
1790 E 7
1791 D 7
1793 F 8
1794 F 8
1795 E 8
1796 D 8
1797 C 8
1971 D 2
1972 D 3
2778 C 7
2779 F11
3778 B 6
3779 E11
3780 F 3
3781 F 4
3782 I 4
3783 D12
3784 D13
3785 D13
3786 E13
3787 E13
3788 I11
3789 I11
3790 H11
3791 H11
3792 G11
4770 E 2
6778 G 6
6779 G 7
6780 G 8
6781 G 9
7970 F12

FRONT PCB (CD)


1796
1972
1791
1786
1971
1781
1777
1797
3139 163
17931
1790
1795
1785
1782
1780
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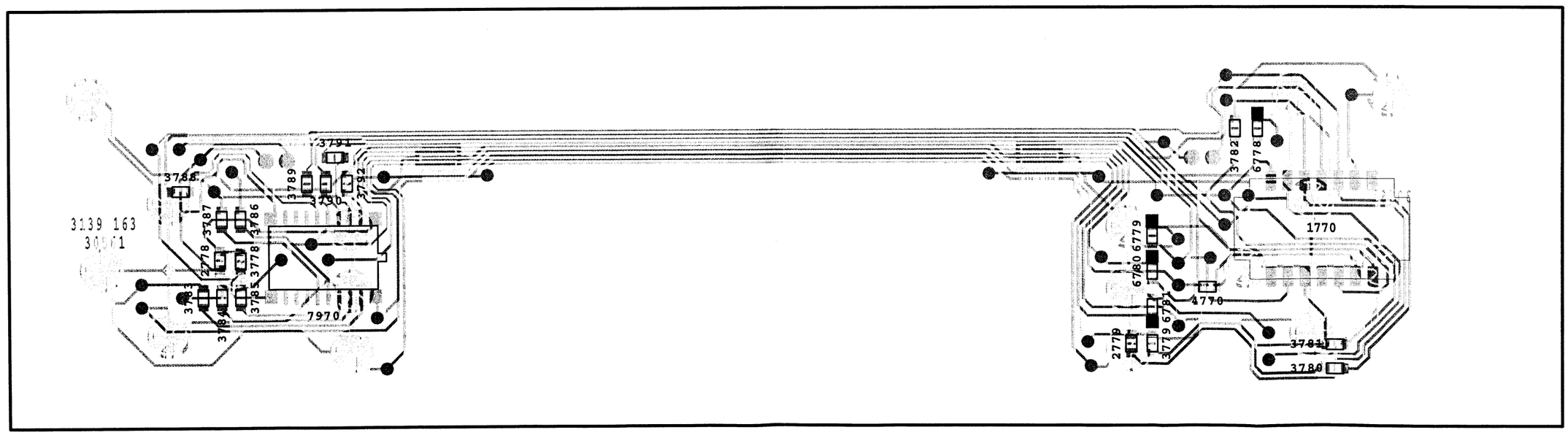
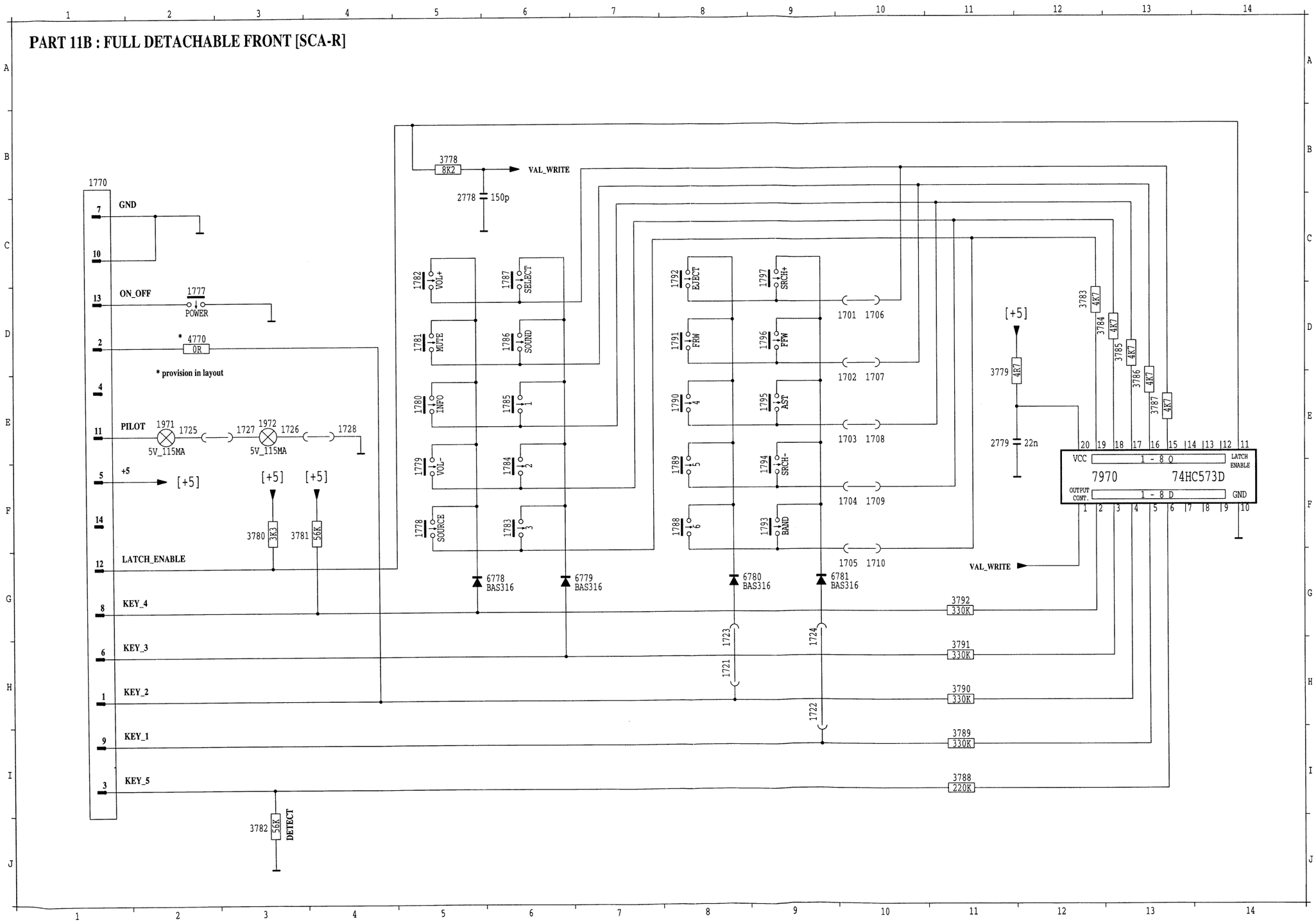
1783
1779
p1-990909-3

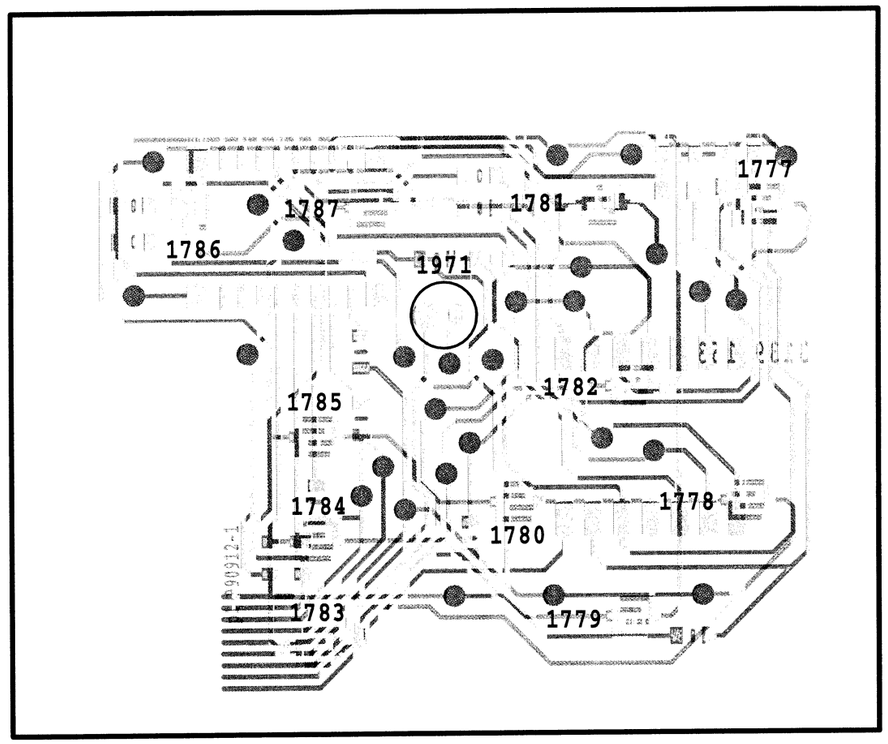

3791
3788
3789
3792
3139 163
3787
3786
3778
3782
6778
6780 6779
1770
4770
7970
2779
3779 6781
3781
3780

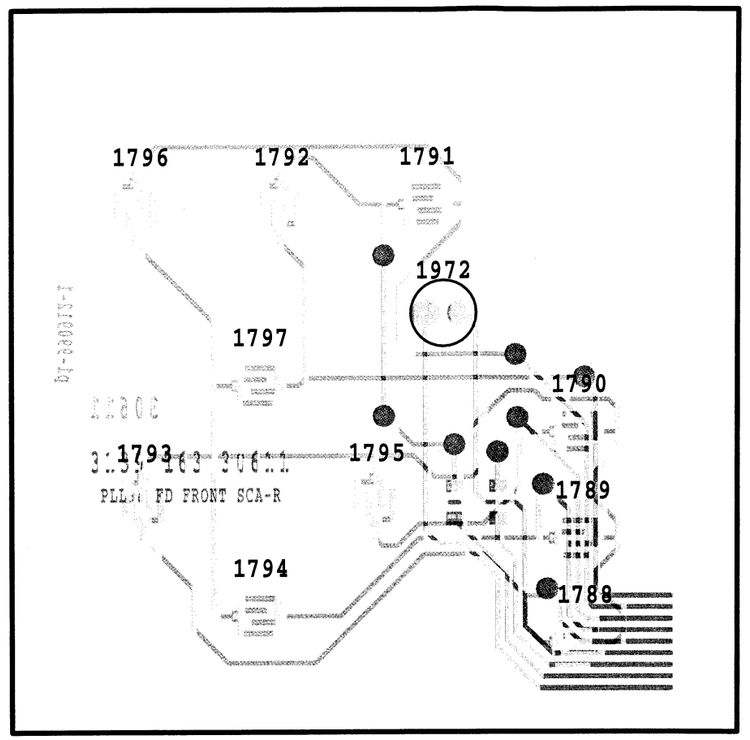
PART 11B : FULL DETACHABLE FRONT [SCA-R]

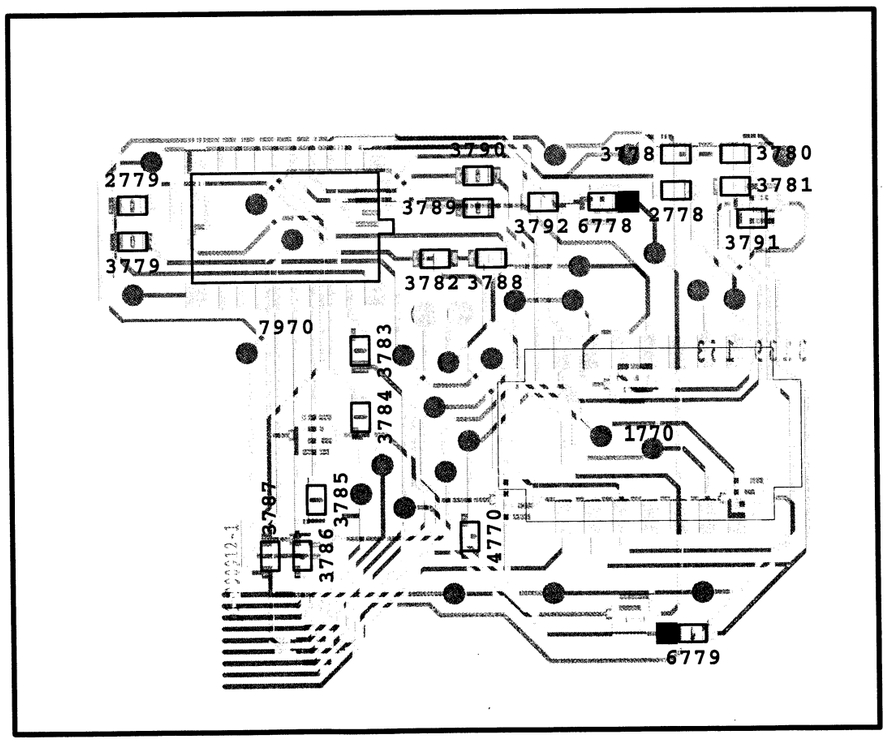


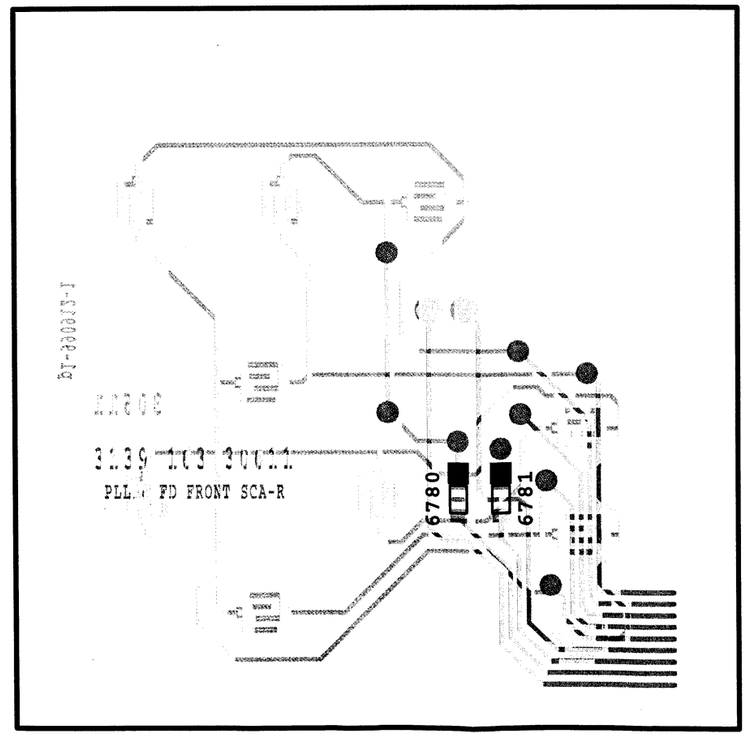
1701 D10
1702 E10
1703 E10
1704 F10
1705 G10
1706 D10
1707 E10
1708 E10
1709 F10
1710 G10
1721 H 8
1722 H 9
1723 H 8
1724 H 9
1725 E 2
1726 E 3
1727 E 3
1728 E 4
1770 B 1
1777 D 2
1778 F 5
1779 F 5
1780 E 5
1781 D 5
1782 C 5
1783 F 6
1784 E 6
1785 D 6
1786 C 6
1787 F 8
1788 F 8
1789 E 8
1790 D 8
1791 C 8
1792 F 9
1793 F 9
1794 E 9
1795 D 9
1796 C 9
1971 E 2
1972 E 3
2778 C 5
2779 E11
3778 B 5
3779 E11
3780 F 3
3781 F 3
3782 J 3
3783 D12
3784 D13
3785 D13
3786 E13
3787 E13
3788 I11
3789 I11
3790 H11
3791 H11
3792 G11
4770 D 2
6778 G 6
6779 G 7
6780 G 9
6781 G10
7970 F12

FRONT PCB (SCA)

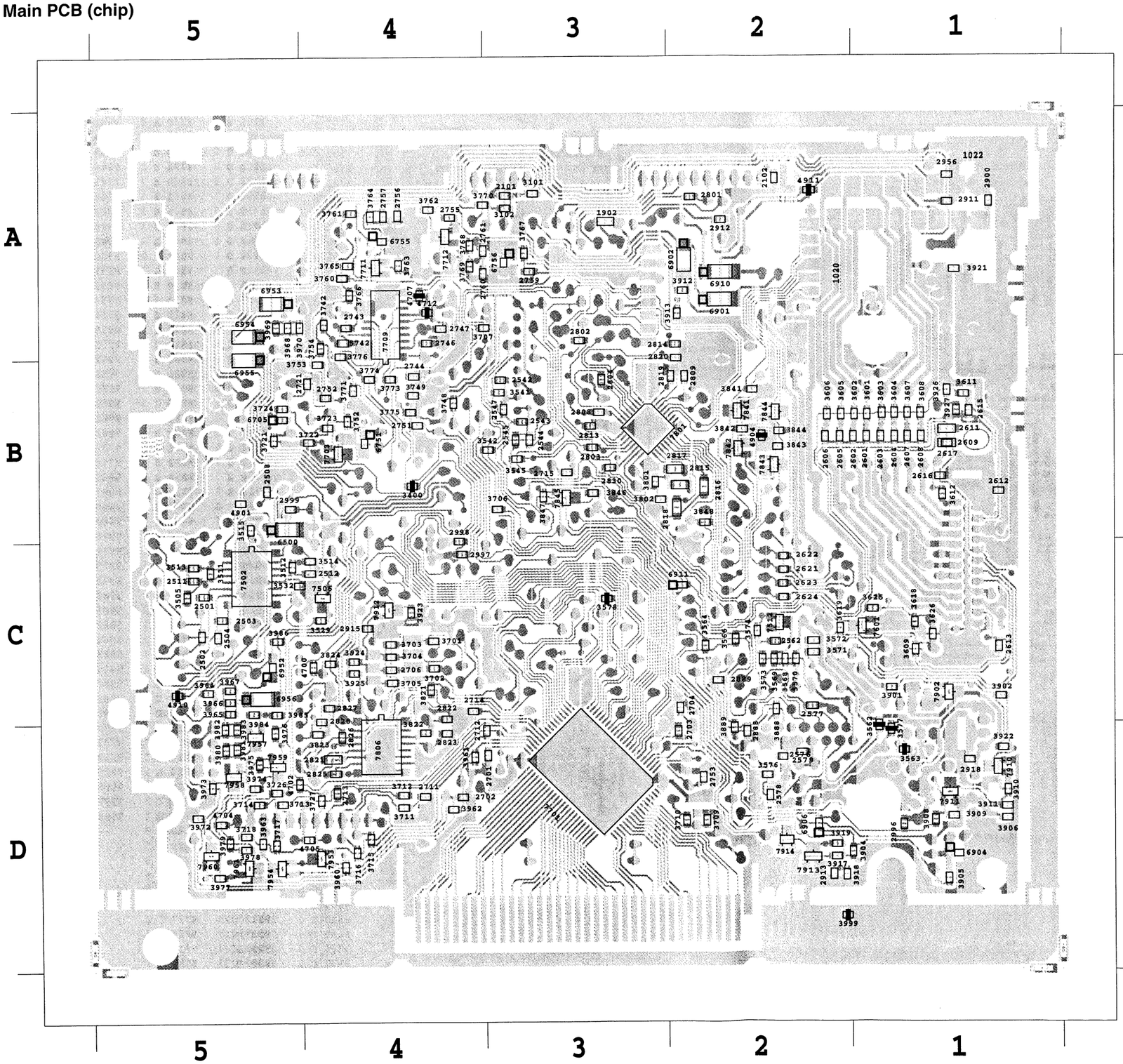






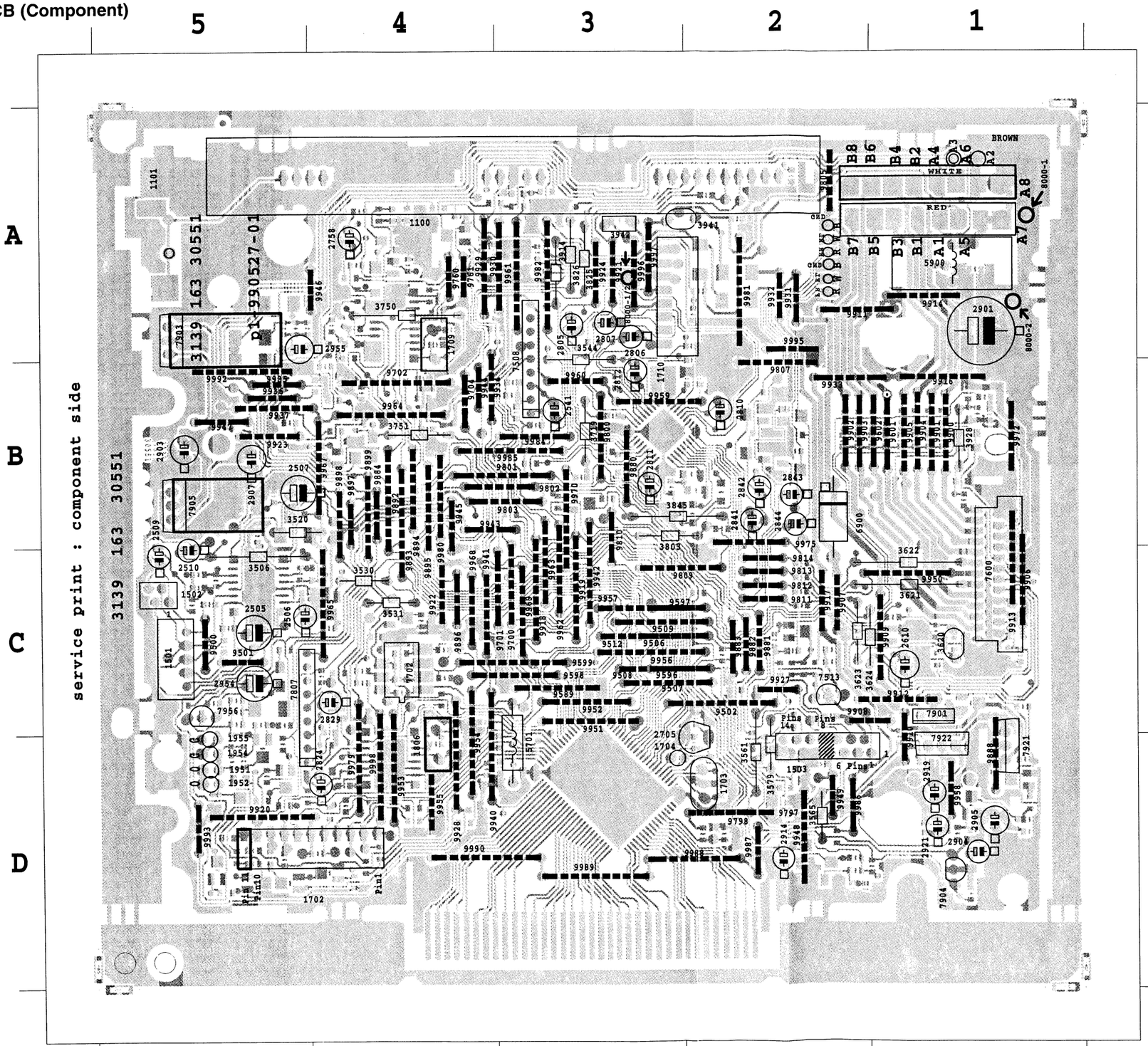


Main PCB (chip)



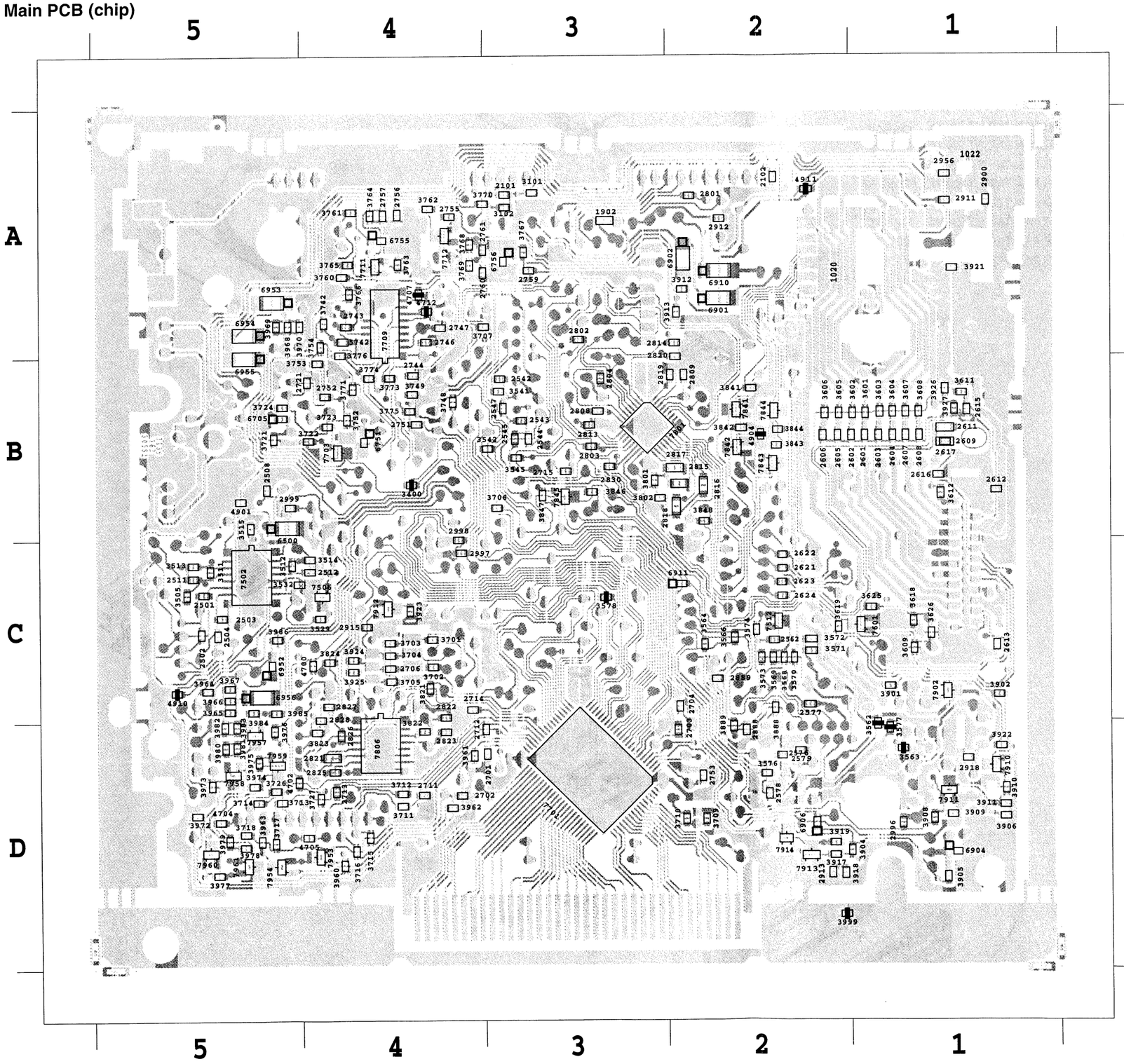
3999 D 2	2761 A 3	3603 B 1	3843 B 2	6705 B 5
----	2801 A 2	3604 B 1	3844 B 2	6751 B 4
1020 A 2	2802 A 3	3605 B 2	3846 B 3	6755 A 4
1022 A 1	2803 B 3	3606 B 2	3847 B 3	6756 A 3
1902 A 3	2804 B 3	3607 B 1	3848 B 2	6901 A 2
2101 A 3	2808 B 3	3608 B 1	3888 C 2	6902 A 2
2102 A 2	2809 B 2	3609 C 1	3889 D 2	6904 D 1
2501 C 5	2813 B 3	3611 B 1	3901 C 1	6906 D 2
2502 C 5	2814 A 2	3612 B 1	3902 C 1	6910 A 2
2503 C 5	2815 B 2	3618 C 1	3904 D 1	6911 C 2
2504 C 5	2816 B 2	3619 C 2	3905 D 1	6952 C 5
2508 B 5	2817 B 2	3625 C 1	3906 D 1	6953 A 5
2511 C 5	2818 B 2	3626 C 1	3908 D 1	6954 A 5
2512 C 4	2819 B 2	3701 C 4	3909 D 1	6955 B 5
2542 B 3	2820 B 2	3702 C 4	3910 D 1	6956 C 5
2543 B 3	2821 D 4	3703 C 4	3911 D 1	7502 C 5
2544 B 3	2822 C 4	3704 C 4	3912 A 2	7506 C 4
2545 B 3	2823 D 4	3705 C 4	3913 A 2	7512 C 2
2547 B 3	2825 D 4	3706 B 3	3917 D 2	7601 C 1
2562 C 2	2826 D 4	3707 A 3	3918 D 2	7701 D 3
2576 D 2	2827 C 4	3709 D 2	3919 D 2	7703 B 4
2577 C 2	2828 C 4	3710 D 2	3921 A 1	7709 A 4
2578 D 2	2830 B 3	3711 D 4	3922 D 1	7711 A 4
2579 D 2	2888 D 2	3712 D 4	3923 C 4	7712 A 4
2601 B 1	2889 C 2	3713 D 5	3924 C 4	7801 B 3
2602 B 1	2900 A 1	3714 D 5	3925 C 4	7806 D 4
2603 B 1	2911 A 1	3715 D 4	3926 B 1	7841 B 2
2604 B 1	2912 A 2	3716 D 4	3927 B 1	7842 B 2
2605 B 2	2913 D 2	3717 D 5	3960 D 4	7843 B 2
2606 B 2	2915 C 4	3718 D 5	3961 D 4	7844 B 2
2607 B 1	2918 D 1	3721 B 5	3962 D 4	7845 B 3
2608 B 1	2956 A 1	3722 B 4	3963 D 5	7902 C 1
2609 B 1	2996 D 1	3723 B 4	3964 C 5	7910 D 1
2611 B 1	2997 C 4	3724 B 5	3965 C 5	7911 D 1
2612 B 1	2998 C 4	3726 D 5	3966 C 5	7912 C 4
2613 C 1	2999 B 5	3727 D 4	3967 C 5	7913 D 2
2615 B 1	3101 A 3	3742 A 4	3968 A 5	7914 D 2
2616 B 1	3102 A 3	3748 B 4	3969 A 5	7953 D 4
2617 B 1	3400 B 4	3749 B 4	3970 A 5	7954 D 5
2621 C 2	3505 C 5	3752 B 4	3972 D 5	7957 D 5
2622 C 2	3511 C 5	3753 B 4	3973 D 5	7958 D 5
2623 C 2	3512 C 5	3754 A 4	3974 D 5	7959 D 5
2624 C 2	3513 C 5	3760 A 4	3975 D 5	7960 D 5
2701 D 3	3514 C 4	3761 A 4	3976 D 5	7961 D 5
2702 D 4	3515 B 5	3762 A 4	3977 D 5	
2703 D 2	3529 C 4	3763 A 4	3978 D 5	
2704 C 2	3532 C 5	3764 A 4	3979 D 5	
2706 C 4	3541 B 3	3765 A 4	3980 D 5	
2711 D 4	3542 B 3	3766 A 4	3981 D 5	
2712 D 3	3545 B 3	3767 A 3	3982 D 5	
2713 D 4	3562 D 1	3768 A 4	3983 D 5	
2714 C 4	3563 D 1	3769 A 4	3984 C 5	
2715 B 3	3564 C 2	3770 A 3	3985 C 5	
2721 B 4	3566 C 2	3771 B 4	3986 C 5	
2743 A 4	3568 C 2	3773 B 4	4700 C 4	
2744 B 4	3569 C 2	3774 B 4	4702 D 5	
2746 A 4	3570 C 2	3775 B 4	4704 D 5	
2747 A 4	3571 C 2	3776 A 4	4705 D 4	
2751 B 4	3572 C 2	3801 B 3	4707 A 4	
2752 B 4	3573 C 2	3802 B 3	4712 A 4	
2753 D 2	3574 C 2	3821 C 4	4901 B 5	
2755 A 4	3576 D 2	3822 D 4	4904 B 2	
2756 A 4	3577 D 1	3823 D 4	4910 C 5	
2757 A 4	3578 C 3	3824 C 4	4911 A 2	
2759 A 3	3601 B 1	3841 B 2	5742 A 4	
2760 A 3	3602 B 1	3842 B 2	6500 B 5	

Main PCB (Component)



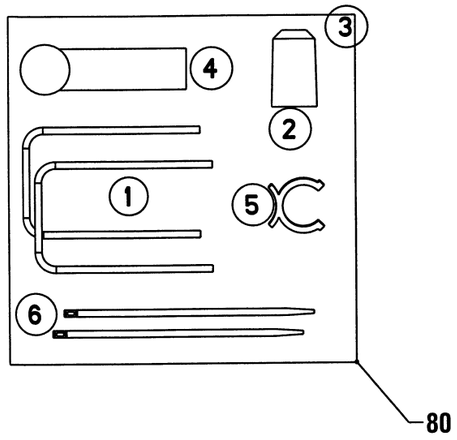
1002	A 1	9602	B 1	9934	B 4		
1014	A 2	9700	C 3	9935	B 5		
1016	A 2	9701	C 3	9936	B 5		
1019	A 2	9702	B 4	9937	B 5		
1100	A 3	9704	B 4	9940	D 4		
1101	A 5	9760	A 4	9941	C 4		
1501	C 5	9761	A 4	9942	C 3		
1502	C 5	9797	D 2	9943	B 4		
1503	D 2	9798	D 2	9944	B 4		
1702	D 5	9800	B 3	9945	B 4		
1704	D 3	9801	B 3	9946	A 4		
1710	A 3	9802	B 3	9947	B 5		
1951	D 5	9803	B 3	9948	D 2		
1952	D 5	9805	A 2	9949	D 2		
1954	D 5	9807	B 2	9950	C 1		
1955	D 5	9809	C 3	9951	C 3		
2705	D 2	9810	B 3	9952	C 3		
2901	A 1	9811	C 2	9953	D 4		
3506	C 5	9812	C 2	9954	D 4		
3520	B 5	9813	C 2	9955	D 4		
3530	C 4	9814	C 2	9956	C 3		
3531	C 4	9880	B 3	9957	C 3		
3544	B 3	9881	C 2	9958	D 1		
3561	D 2	9882	C 2	9959	B 3		
3565	D 2	9883	C 2	9960	B 3		
3579	D 2	9884	B 4	9961	A 3		
3621	C 1	9888	D 1	9962	C 3		
3622	C 1	9892	B 4	9963	C 3		
3623	C 2	9893	B 4	9964	B 4		
3624	C 1	9894	B 4	9965	C 4		
3719	B 3	9895	B 4	9967	B 4		
3750	A 4	9896	C 4	9968	C 4		
3751	B 4	9897	B 4	9969	C 3		
3803	B 3	9898	B 4	9970	B 3		
3825	A 3	9899	B 4	9972	B 1		
3826	A 3	9900	B 1	9975	B 2		
3845	B 3	9901	B 1	9979	D 4		
3914	A 3	9902	B 2	9980	B 4		
3928	B 1	9903	B 2	9981	A 2		
3942	A 3	9904	B 1	9982	A 3		
5701	D 3	9905	B 1	9984	B 3		
5900	A 1	9906	C 1	9985	B 3		
6900	B 2	9907	C 2	9986	D 2		
7508	A 3	9908	C 2	9987	D 2		
7600	C 1	9909	C 1	9988	D 2		
7702	C 4	9910	D 1	9989	D 3		
7807	C 5	9911	A 2	9990	D 4		
7901	C 1	9912	C 1	9992	B 5		
7903	A 5	9913	C 1	9993	D 5		
7905	B 5	9914	A 1	9995	A 2		
7921	D 1	9916	B 1	9996	A 3		
7922	D 1	9917	C 2	9997	A 3		
9500	C 5	9918	C 3	9998	D 4		
9501	C 5	9919	C 3	----			
9502	C 2	9920	D 5				
9506	C 3	9921	A 3				
9507	C 3	9922	C 4				
9508	C 3	9923	B 5				
9509	C 3	9924	A 3				
9512	C 3	9927	C 2				
9589	C 3	9928	D 4				
9596	C 3	9929	A 4				
9597	C 3	9930	A 3				
9598	C 3	9931	A 2				
9599	C 3	9932	A 2				
9601	B 1	9933	B 2				

Main PCB (chip)

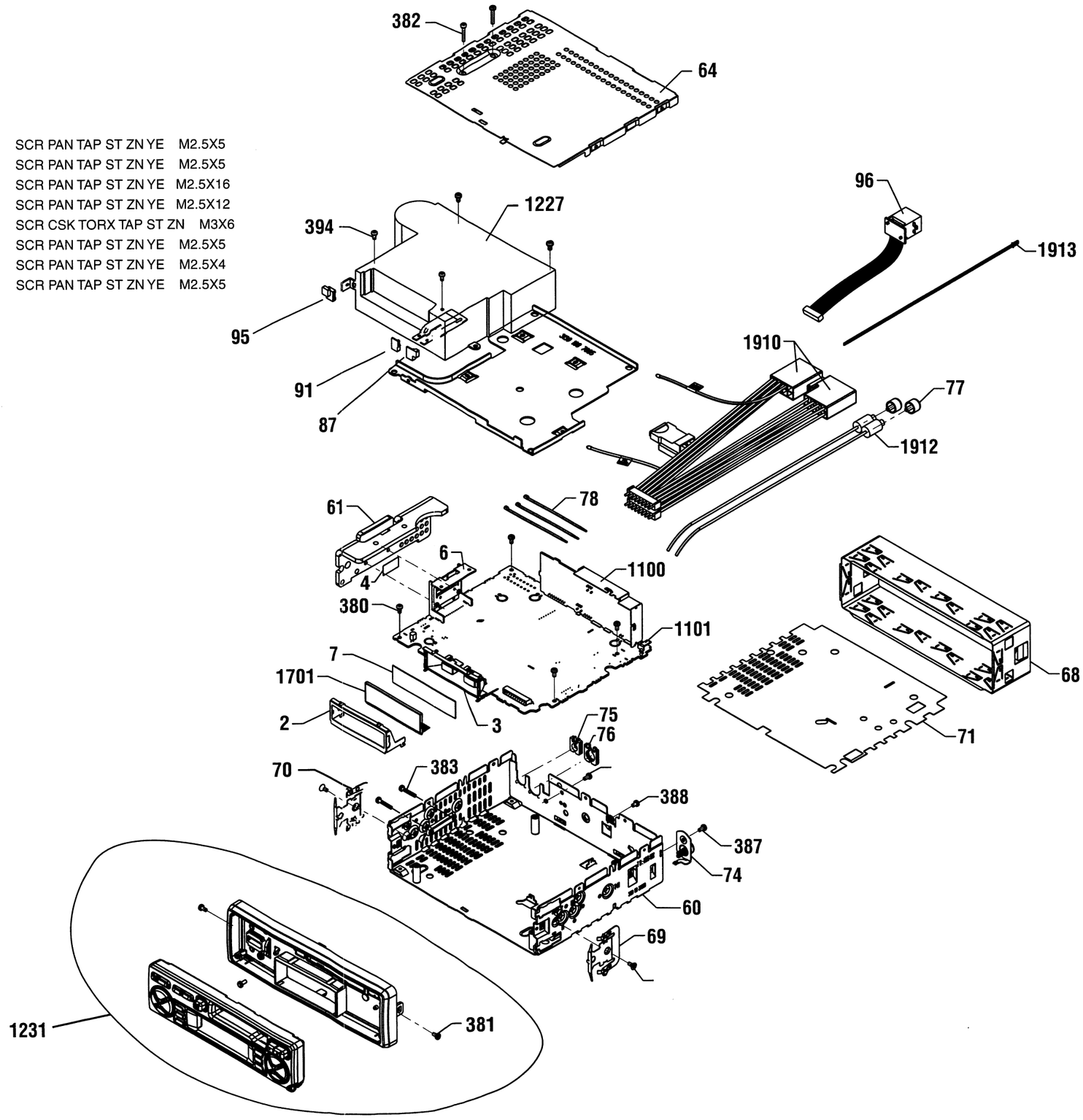


3999 D 2	2761 A 3	3603 B 1	3843 B 2	6705 B 5
----	2801 A 2	3604 B 1	3844 B 2	6751 B 4
1020 A 2	2802 A 3	3605 B 2	3846 B 3	6755 A 4
1022 A 1	2803 B 3	3606 B 2	3847 B 3	6756 A 3
1902 A 3	2804 B 3	3607 B 1	3848 B 2	6901 A 2
2101 A 3	2808 B 3	3608 B 1	3888 C 2	6902 A 2
2102 A 2	2809 B 2	3609 C 1	3889 D 2	6904 D 1
2501 C 5	2813 B 3	3611 B 1	3901 C 1	6906 D 2
2502 C 5	2814 A 2	3612 B 1	3902 C 1	6910 A 2
2503 C 5	2815 B 2	3618 C 1	3904 D 1	6911 C 2
2504 C 5	2816 B 2	3619 C 2	3905 D 1	6952 C 5
2508 B 5	2817 B 2	3625 C 1	3906 D 1	6953 A 5
2511 C 5	2818 B 2	3626 C 1	3908 D 1	6954 A 5
2512 C 4	2819 B 2	3701 C 4	3909 D 1	6955 B 5
2542 B 3	2820 B 2	3702 C 4	3910 D 1	6956 C 5
2543 B 3	2821 D 4	3703 C 4	3911 D 1	7502 C 5
2544 B 3	2822 C 4	3704 C 4	3912 A 2	7506 C 4
2545 B 3	2823 D 4	3705 C 4	3913 A 2	7512 C 2
2547 B 3	2825 D 4	3706 B 3	3917 D 2	7601 C 1
2562 C 2	2826 D 4	3707 A 3	3918 D 2	7701 D 3
2576 D 2	2827 C 4	3709 D 2	3919 D 2	7703 B 4
2577 C 2	2828 C 4	3710 D 2	3921 A 1	7709 A 4
2578 D 2	2830 B 3	3711 D 4	3922 D 1	7711 A 4
2579 D 2	2888 D 2	3712 D 4	3923 C 4	7712 A 4
2601 B 1	2889 C 2	3713 D 5	3924 C 4	7801 B 3
2602 B 1	2900 A 1	3714 D 5	3925 C 4	7806 D 4
2603 B 1	2911 A 1	3715 D 4	3926 B 1	7841 B 2
2604 B 1	2912 A 2	3716 D 4	3927 B 1	7842 B 2
2605 B 2	2913 D 2	3717 D 5	3960 D 4	7843 B 2
2606 B 2	2915 C 4	3718 D 5	3961 D 4	7844 B 2
2607 B 1	2918 D 1	3721 B 5	3962 D 4	7845 B 3
2608 B 1	2956 A 1	3722 B 4	3963 D 5	7902 C 1
2609 B 1	2996 D 1	3723 B 4	3964 C 5	7910 D 1
2611 B 1	2997 C 4	3724 B 5	3965 C 5	7911 D 1
2612 B 1	2998 C 4	3726 D 5	3966 C 5	7912 C 4
2613 C 1	2999 B 5	3727 D 4	3967 C 5	7913 D 2
2615 B 1	3101 A 3	3742 A 4	3968 A 5	7914 D 2
2616 B 1	3102 A 3	3748 B 4	3969 A 5	7953 D 4
2617 B 1	3400 B 4	3749 B 4	3970 A 5	7954 D 5
2621 C 2	3505 C 5	3752 B 4	3972 D 5	7957 D 5
2622 C 2	3511 C 5	3753 B 4	3973 D 5	7958 D 5
2623 C 2	3512 C 5	3754 A 4	3974 D 5	7959 D 5
2624 C 2	3513 C 5	3760 A 4	3975 D 5	7960 D 5
2701 D 3	3514 C 4	3761 A 4	3976 D 5	7961 D 5
2702 D 4	3515 B 5	3762 A 4	3977 D 5	
2703 D 2	3529 C 4	3763 A 4	3978 D 5	
2704 C 2	3532 C 5	3764 A 4	3979 D 5	
2706 C 4	3541 B 3	3765 A 4	3980 D 5	
2711 D 4	3542 B 3	3766 A 4	3981 D 5	
2712 D 3	3545 B 3	3767 A 3	3982 D 5	
2713 D 4	3562 D 1	3768 A 4	3983 D 5	
2714 C 4	3563 D 1	3769 A 4	3984 C 5	
2715 B 3	3564 C 2	3770 A 3	3985 C 5	
2721 B 4	3566 C 2	3771 B 4	3986 C 5	
2743 A 4	3568 C 2	3773 B 4	4700 C 4	
2744 B 4	3569 C 2	3774 B 4	4702 D 5	
2746 A 4	3570 C 2	3775 B 4	4704 D 5	
2747 A 4	3571 C 2	3776 A 4	4705 D 4	
2751 B 4	3572 C 2	3801 B 3	4707 A 4	
2752 B 4	3573 C 2	3802 B 3	4712 A 4	
2753 D 2	3574 C 2	3821 C 4	4901 B 5	
2755 A 4	3576 D 2	3822 D 4	4904 B 2	
2756 A 4	3577 D 1	3823 D 4	4910 C 5	
2757 A 4	3578 C 3	3824 C 4	4911 A 2	
2759 A 3	3601 B 1	3841 B 2	5742 A 4	
2760 A 3	3602 B 1	3842 B 2	6500 B 5	

ARC430 / ARC420 EXPLODED VIEW



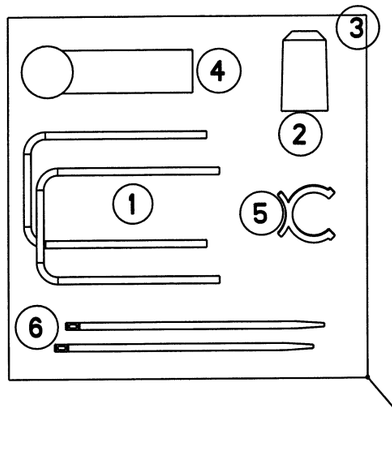
380	SCR PAN TAP ST ZN YE	M2.5X5
381	SCR PAN TAP ST ZN YE	M2.5X5
382	SCR PAN TAP ST ZN YE	M2.5X16
383	SCR PAN TAP ST ZN YE	M2.5X12
384	SCR CSK TORX TAP ST ZN	M3X6
387	SCR PAN TAP ST ZN YE	M2.5X5
388	SCR PAN TAP ST ZN YE	M2.5X4
394	SCR PAN TAP ST ZN YE	M2.5X5



Only those parts of which the item number stated here are considered service parts.

68	3111 111 35640	SLEEVE
69	3111 111 06370	SPRING MOUTING
74	3112 358 24600	PUSH AERIAL ASSY
80-1	3122 111 35250	BRACKET MOUNTING
80-2	3112 374 10910	BUFFER MOUNTING
80-4	3111 117 52170	ADAPTOR AERIAL
80-5	3111 114 65160	HOLDER AERIAL ADAPTOR
87	3139 164 03090	INSERT FFW CDS
91	3139 164 03110	INSERT FRW CDS
95	3139 164 03070	INSERT EJECT CDS
96	3139 168 70600	CONNECTOR ASSYT CDCC
1231	3139 167 56950	FRONT PACKED ASSY - ARC430/00
1231	3139 167 56450	FRONT PACKED ASSY - ARC420/00
1227	3139 168 70850	TAPEDECK CDS36PS4 ASSY
	3139 164 03130	BOX DU
	3139 166 10480	DFU

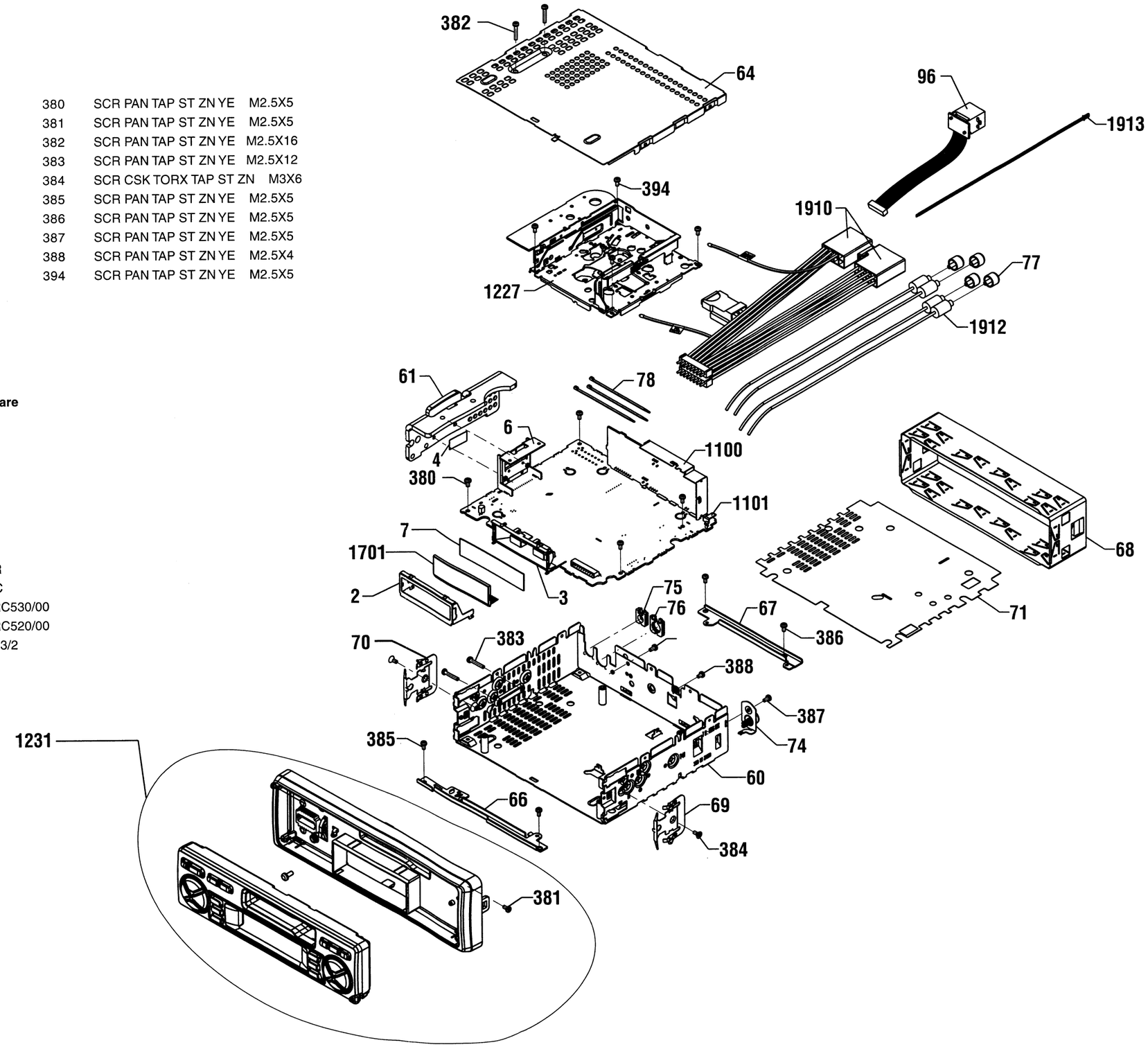
ARC530 / ARC520 EXPLODED VIEW

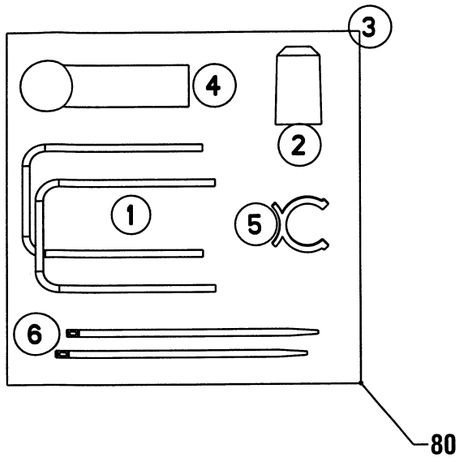


380		SCR PAN TAP ST ZN YE M2.5X5
381		SCR PAN TAP ST ZN YE M2.5X5
382		SCR PAN TAP ST ZN YE M2.5X16
383		SCR PAN TAP ST ZN YE M2.5X12
384		SCR CSK TORX TAP ST ZN M3X6
385		SCR PAN TAP ST ZN YE M2.5X5
386		SCR PAN TAP ST ZN YE M2.5X5
387		SCR PAN TAP ST ZN YE M2.5X5
388		SCR PAN TAP ST ZN YE M2.5X4
394		SCR PAN TAP ST ZN YE M2.5X5

Only those parts of which the item number stated here are considered service parts.

68	3111 111 35640	SLEEVE
69	3111 111 06370	SPRING MOUTING
74	3112 358 24600	PUSH AERIAL ASSY
80-1	3122 111 35250	BRACKET MOUNTING
80-2	3112 374 10910	BUFFER MOUNTING
80-4	3111 117 52170	ADAPTOR AERIAL
80-5	3111 114 65160	HOLDER AERIAL ADAPTOR
96	3139 168 70600	CONNECTOR ASSYT CDCC
1231	3139 167 57020	FRONT PACKED ASSY - ARC530/00
1231	3139 167 56440	FRONT PACKED ASSY - ARC520/00
1227	3112 358 69740	TAPE DECK ASSY SCA-R 3.3/2
	3139 164 03130	BOX DU
	3139 166 10480	DFU

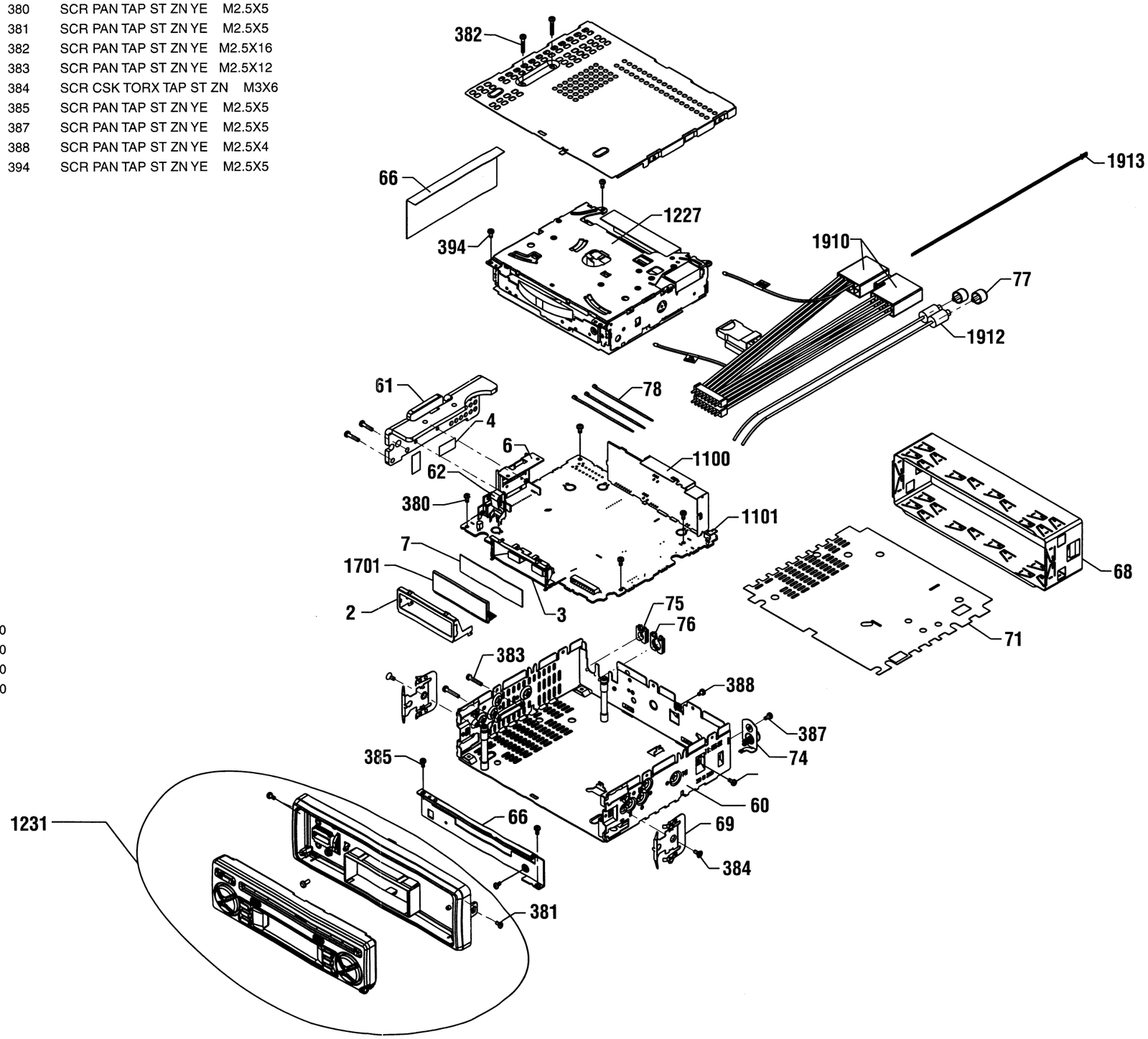




380		SCR PAN TAP ST ZN YE M2.5X5
381		SCR PAN TAP ST ZN YE M2.5X5
382		SCR PAN TAP ST ZN YE M2.5X16
383		SCR PAN TAP ST ZN YE M2.5X12
384		SCR CSK TORX TAP ST ZN M3X6
385		SCR PAN TAP ST ZN YE M2.5X5
387		SCR PAN TAP ST ZN YE M2.5X5
388		SCR PAN TAP ST ZN YE M2.5X4
394		SCR PAN TAP ST ZN YE M2.5X5

Only those parts of which the item number stated here are considered service parts.

68	3111 111 35640	SLEEVE
69	3111 111 06370	SPRING MOUTING
74	3112 358 24600	PUSH AERIAL ASSY
80-1	3122 111 35250	BRACKET MOUNTING
80-2	3112 374 10910	BUFFER MOUNTING
80-4	3111 117 52170	ADAPTOR AERIAL
80-5	3111 114 65160	HOLDER AERIAL ADAPTOR
1231	3139 167 56700	FRONT PACKED ASSY - RC660/00
1231	3139 167 56430	FRONT PACKED ASSY - RC610/00
1231	3139 167 57070	FRONT PACKED ASSY - RC620/00
1231	3139 167 57130	FRONT PACKED ASSY - RC670/00
1227	8239 160 00060	CDM-M5/4.1
	3139 164 03130	BOX DU
	3139 166 10480	DFU



ARC430 / ARC420 PARTSLIST

MAIN PCB : MISCELLANEOUS

1100	3139 168 70860	TUNER IC96 7SCV
1701	9360 279 90112	LCD PANEL LPH6401-1
1703	2422 540 98189	RES CER 8MHZ CST8.00MTW
1704	2422 543 00056	RES XTL 32KHZ768 12P5 DT-38
1709	2422 540 98457	RES CER 6MHZ CSA*MGU
1806	3112 339 02990	QUARZ 4,332 MHZ AT51
1910	3139 168 70840	CABLE ASSY REAR
1912	3139 168 70470	CABLE FLYLEAD ASSY LINE-OUT
1913	3139 168 70620	CABLE LE MOUSE
1951	3139 168 70960	LAMP T1 5V 115MA ASSY (CLEAR)
1952	3139 168 70960	LAMP T1 5V 115MA ASSY (CLEAR)

MAIN PCB : CAPACITORS

2505	2020 012 92941	ELCAP KS 10V S 100U PM20
2506	2020 012 92035	ELCAP KS 16V S 10U PM20
2507	2020 012 92941	ELCAP KS 10V S 100U PM20
2509	2020 012 92035	ELCAP KS 16V S 10U PM20
2510	2020 012 92035	ELCAP KS 16V S 10U PM20
2610	2020 021 91156	ELCAP NHE 50V S 10U PM20
2705	2020 800 00028	CTRM 50V 6P-50P NP0 H
2758	2020 012 92038	ELCAP KS 16V S 47U PM20
2805	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2806	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2807	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2810	2020 012 92035	ELCAP KS 16V S 10U PM20
2811	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2812	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2824	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2841	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2842	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2901	2020 021 91377	ELCAP VZ 16V S 3300U PM20
2903	2020 012 92036	ELCAP KS 16V S 22U PM20
2904	2020 012 92035	ELCAP KS 16V S 10U PM20
2905	2020 021 91156	ELCAP NHE 50V S 10U PM20
2907	2020 012 92036	ELCAP KS 16V S 22U PM20
2914	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2954	2020 012 92038	ELCAP KS 16V S 47U PM20
2955	2020 012 92036	ELCAP KS 16V S 22U PM20

MAIN PCB : RESISTORS

3620	2120 661 00016	PTC DC PTH9 16V S 330R PM
3941	2322 661 91064	PTC DC 20V S 3R3 PM25
3942	2122 662 00097	PTC DC 0A9 30V S 0R09 PM20

MAIN PCB : COILS, DIODE

5701	2422 535 97355	IND FXD LAL04 A 1000U PM10
5742	2422 549 41993	IND FXD SM EMI 100MHZ 600R
5900	3111 117 10910	COIL ASSY 97UH 10A
6500	9322 098 82685	DIO REC SM 1SR154-400
6705	9340 549 45115	DIO SIG SM BAS316
6751	9322 125 44685	DIO REG SM UDZS5.6B
6755	9322 097 41685	DIO REG SM UDZ20B
6756	9322 097 41685	DIO REG SM UDZ20B
6900	9322 001 05683	DIO REG 1.5KE27
6901	9322 098 82685	DIO REC SM 1SR154-400
6902	9322 098 82685	DIO REC SM 1SR154-400
6904	9322 125 44685	DIO REG SM UDZS5.6B
6906	9340 549 45115	DIO SIG SM BAS316
6910	9322 098 82685	DIO REC SM 1SR154-400
6911	9340 549 45115	DIO SIG SM BAS316
6952	9322 097 43685	DIO REG SM UDZ11B
6953	9322 098 82685	DIO REC SM 1SR154-400
6954	9322 098 82685	DIO REC SM 1SR154-400
6955	9322 098 82685	DIO REC SM 1SR154-400
6956	9322 098 82685	DIO REC SM 1SR154-400

MAIN PCB : TRANSISTORS / IC

7502	9352 173 00118	IC SM TEA0676T/V1
7512	9335 895 90215	TRA SIG SM BC847B
7513	9332 219 50126	TRA SIG BC636
7600	9322 128 42667	IC TDA7384A
7601	9335 895 90215	TRA SIG SM BC847B
7701	3139 160 51520	IC SM TMP87CM21F 1E36
7703	9335 895 90215	TRA SIG SM BC847B
7709	3139 160 51260	IC SM TMP47C202M 1A69
7711	9335 895 90215	TRA SIG SM BC847B
7712	9335 895 90215	TRA SIG SM BC847B
7801	9322 082 67671	IC SM TDA7342
7806	9322 119 56668	IC SM TDA7479D
7841	9322 126 87685	TRA SIG SM DTC314TK
7842	9322 126 87685	TRA SIG SM DTC314TK
7845	9335 897 60215	TRA SIG SM BC857B
7901	9335 358 00687	TRA POW BD438
7902	9335 897 60215	TRA SIG SM BC857B
7903	9322 057 57682	IC L7885CV
7904	9331 976 30126	TRA SIG BC547B
7905	9322 060 57682	IC L7805ABV/FPH
7910	9335 895 90215	TRA SIG SM BC847B
7911	9335 897 60215	TRA SIG SM BC857B
7912	9335 897 60215	TRA SIG SM BC857B
7913	9335 895 90215	TRA SIG SM BC847B
7914	9335 895 90215	TRA SIG SM BC847B
7953	9335 897 60215	TRA SIG SM BC857B
7954	9335 897 60215	TRA SIG SM BC857B
7956	9331 976 30126	TRA SIG BC547B
7957	9335 895 00215	TRA SIG SM BC807

NOTE: Code number for Standard components are not listed here, please refer to standard components catalogue.

ARC530 / ARC520 PARTSLIST

MAIN PCB : MISCELLANEOUS

1100	3139 168 70860	TUNER IC96 7SCV
1701	9360 279 90112	LCD PANEL LPH6401-1
1703	2422 540 98189	RES CER 8MHZ CST8.00MTW
1704	2422 543 00056	RES XTL 32KHZ768 12P5 DT-38
1709	2422 540 98457	RES CER 6MHZ CSA*MGU
1806	3112 339 02990	QUARZ 4,332 MHZ AT51
1910	3139 168 70840	CABLE ASSY REAR
1912	3139 168 70640	CABLE FLYLEAD 4CH LINE-OUT - ARC530/00
1912	3139 168 70470	CABLE FLYLEAD 2CH LINE-OUT - ARC520/00
1913	3139 168 70620	CABLE LE MOUSE
1951	3139 168 70960	LAMP T1 5V 115MA ASSY (CLEAR)
1952	3139 168 70960	LAMP T1 5V 115MA ASSY (CLEAR)

MAIN PCB : CAPACITORS

2505	2020 012 92941	ELCAP KS 10V S 100U PM20
2506	2020 012 92035	ELCAP KS 16V S 10U PM20
2507	2020 012 92941	ELCAP KS 10V S 100U PM20
2509	2020 012 92035	ELCAP KS 16V S 10U PM20
2510	2020 012 92035	ELCAP KS 16V S 10U PM20
2541	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2610	2020 021 91156	ELCAP NHE 50V S 10U PM20
2705	2020 800 00028	CTRM 50V 6P-50P NP0 H
2758	2020 012 92038	ELCAP KS 16V S 47U PM20
2805	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2806	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2807	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2810	2020 012 92035	ELCAP KS 16V S 10U PM20
2811	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2812	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2824	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2841	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2842	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2843	2020 012 92054	ELCAP KS 50V S 2U2 PM20 - ARC530/00
2844	2020 012 92054	ELCAP KS 50V S 2U2 PM20 - ARC530/00
2901	2020 021 91377	ELCAP VZ 16V S 3300U PM20
2903	2020 012 92036	ELCAP KS 16V S 22U PM20
2904	2020 012 92035	ELCAP KS 16V S 10U PM20
2905	2020 021 91156	ELCAP NHE 50V S 10U PM20
2907	2020 012 92036	ELCAP KS 16V S 22U PM20
2914	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2954	2020 012 92038	ELCAP KS 16V S 47U PM20
2955	2020 012 92036	ELCAP KS 16V S 22U PM20

MAIN PCB : RESISTORS

3620	2120 661 00016	PTC DC PTH9 16V S 330R PM
3941	2322 661 91064	PTC DC 20V S 3R3 PM25
3942	2122 662 00097	PTC DC 0A9 30V S 0R09 PM20

MAIN PCB : COILS, DIODE

5701	2422 535 97355	IND FXD LAL04 A 1000U PM10
5742	2422 549 41993	IND FXD SM EMI 100MHZ 600R
5900	3111 117 10910	COIL ASSY 97UH 10A
6500	9322 098 82685	DIO REC SM 1SR154-400
6705	9340 549 45115	DIO SIG SM BAS316
6751	9322 125 44685	DIO REG SM UDZS5.6B
6755	9322 097 41685	DIO REG SM UDZ20B
6756	9322 097 41685	DIO REG SM UDZ20B
6900	9322 001 05683	DIO REG 1.5KE27
6901	9322 098 82685	DIO REC SM 1SR154-400
6902	9322 098 82685	DIO REC SM 1SR154-400
6904	9322 125 44685	DIO REG SM UDZS5.6B
6906	9340 549 45115	DIO SIG SM BAS316
6910	9322 098 82685	DIO REC SM 1SR154-400
6911	9340 549 45115	DIO SIG SM BAS316
6952	9322 097 43685	DIO REG SM UDZ11B
6953	9322 098 82685	DIO REC SM 1SR154-400
6954	9322 098 82685	DIO REC SM 1SR154-400
6955	9322 098 82685	DIO REC SM 1SR154-400
6956	9322 098 82685	DIO REC SM 1SR154-400

MAIN PCB : TRANSISTORS / IC

7502	9352 173 00118	IC SM TEA0676T/V1
7506	9335 895 90215	TRA SIG SM BC847B
7508	9339 030 10682	IC LA2000
7600	9322 128 42667	IC TDA7384A
7601	9335 895 90215	TRA SIG SM BC847B
7701	3139 160 51500	IC SM TMP87CM21F 1E35
7703	9335 895 90215	TRA SIG SM BC847B
7709	3139 160 51260	IC SM TMP47C202M 1A69
7711	9335 895 90215	TRA SIG SM BC847B
7712	9335 895 90215	TRA SIG SM BC847B
7801	9322 082 67671	IC SM TDA7342
7806	9322 119 56668	IC SM TDA7479D
7841	9322 126 87685	TRA SIG SM DTC314TK
7842	9322 126 87685	TRA SIG SM DTC314TK
7843	9322 126 87685	TRA SIG SM DTC314TK - ARC530/00
7844	9322 126 87685	TRA SIG SM DTC314TK - ARC530/00
7845	9335 897 60215	TRA SIG SM BC857B
7901	9335 358 00687	TRA POW BD438
7902	9335 897 60215	TRA SIG SM BC857B
7903	9322 057 57682	IC L7885CV
7904	9331 976 30126	TRA SIG BC547B
7905	9322 060 57682	IC L7805ABV/FPH
7910	9335 895 90215	TRA SIG SM BC847B
7911	9335 897 60215	TRA SIG SM BC857B
7912	9335 897 60215	TRA SIG SM BC857B
7913	9335 895 90215	TRA SIG SM BC847B
7914	9335 895 90215	TRA SIG SM BC847B
7953	9335 897 60215	TRA SIG SM BC857B
7954	9335 897 60215	TRA SIG SM BC857B
7956	9331 976 30126	TRA SIG BC547B
7957	9335 895 00215	TRA SIG SM BC807

NOTE: Code number for Standard components are not listed here, please refer to standard components catalogue.

RC670 / RC660 / RC620 / RC610 PARTSLIST

MAIN PCB : MISCELLANEOUS

1100	3139 168 70860	TUNER IC96 7SCV
1701	9360 279 90112	LCD PANEL LPH6401-1
1703	2422 540 98189	RES CER 8MHZ CST8.00MTW
1704	2422 543 00056	RES XTL 32KHZ768 12P5 DT-38
1806	3112 339 02990	QUARZ 4,332 MHZ AT51 - RC660/00, RC670/00
1910	3139 168 70840	CABLE ASSY REAR
1912	3139 168 70470	CABLE FLYLEAD ASSY LINE-OUT - RC660/00
1912	3139 168 70640	CABLE FLYLEAD 4CH LINE-OUT - RC620/00, RC670/00
1913	3139 168 70620	CABLE LE MOUSE
1951	3139 168 70960	LAMP T1 5V 115MA ASSY (CLEAR)
1952	3139 168 70960	LAMP T1 5V 115MA ASSY (CLEAR)

MAIN PCB : CAPACITORS

2610	2020 021 91156	ELCAP NHE 50V S 10U PM20
2705	2020 800 00028	CTRM 50V 6P-50P NP0 H
2810	2020 012 92035	ELCAP KS 16V S 10U PM20
2811	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2812	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2824	2020 012 92054	ELCAP KS 50V S 2U2 PM20 - RC660/00, RC670/00
2841	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2842	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2843	2020 012 92054	ELCAP KS 50V S 2U2 PM20 - RC620/00, RC670/00
2844	2020 012 92054	ELCAP KS 50V S 2U2 PM20 - RC620/00, RC670/00
2901	2020 021 91377	ELCAP VZ 16V S 3300U PM20
2903	2020 012 92036	ELCAP KS 16V S 22U PM20
2904	2020 012 92035	ELCAP KS 16V S 10U PM20
2905	2020 021 91156	ELCAP NHE 50V S 10U PM20
2907	2020 012 92036	ELCAP KS 16V S 22U PM20
2914	2020 012 92054	ELCAP KS 50V S 2U2 PM20
2919	2020 021 91156	ELCAP NHE 50V S 10U PM20
2921	2020 021 91156	ELCAP NHE 50V S 10U PM20
2954	2020 012 92038	ELCAP KS 16V S 47U PM20
2955	2020 012 92036	ELCAP KS 16V S 22U PM20

MAIN PCB : RESISTORS

3620	2120 661 00016	PTC DC PTH9 16V S 330R PM
3941	2322 661 91064	PTC DC 20V S 3R3 PM25

MAIN PCB : COILS

5701	2422 535 97355	IND FXD LAL04 A 1000U PM10
5900	3111 117 10910	COIL ASSY 97UH 10A

MAIN PCB : DIODE

6705	9340 549 45115	DIO SIG SM BAS316
6751	9322 125 44685	DIO REG SM UDZS5.6B
6900	9322 001 05683	DIO REG 1.5KE27
6901	9322 098 82685	DIO REC SM 1SR154-400
6902	9322 098 82685	DIO REC SM 1SR154-400
6904	9322 125 44685	DIO REG SM UDZS5.6B
6906	9340 549 45115	DIO SIG SM BAS316
6910	9322 098 82685	DIO REC SM 1SR154-400
6911	9340 549 45115	DIO SIG SM BAS316
6952	9322 097 43685	DIO REG SM UDZ11B
6953	9322 098 82685	DIO REC SM 1SR154-400
6954	9322 098 82685	DIO REC SM 1SR154-400
6955	9322 098 82685	DIO REC SM 1SR154-400
6956	9322 098 82685	DIO REC SM 1SR154-400

MAIN PCB : TRANSISTORS / IC

7600	9322 128 42667	IC TDA7384A
7601	9335 895 90215	TRA SIG SM BC847B
7701	3139 160 51270	IC SM TMP87CM21F 1E34
7703	9335 895 90215	TRA SIG SM BC847B
7801	9322 082 67671	IC SM TDA7342
7806	9322 119 56668	IC SM TDA7479D - RC660/00, RC670/00
7841	9322 126 87685	TRA SIG SM DTC314TK
7842	9322 126 87685	TRA SIG SM DTC314TK
7843	9322 126 87685	TRA SIG SM DTC314TK - RC620/00, RC670/00
7844	9322 126 87685	TRA SIG SM DTC314TK - RC620/00, RC670/00
7845	9335 897 60215	TRA SIG SM BC857B
7901	9335 358 00687	TRA POW BD438
7902	9335 897 60215	TRA SIG SM BC857B
7903	9322 057 57682	IC L7885CV
7904	9331 976 30126	TRA SIG BC547B
7905	9322 060 57682	IC L7805ABV/FPH
7910	9335 895 90215	TRA SIG SM BC847B
7911	9335 897 60215	TRA SIG SM BC857B
7912	9335 897 60215	TRA SIG SM BC857B
7913	9335 895 90215	TRA SIG SM BC847B
7914	9335 895 90215	TRA SIG SM BC847B
7921	9322 142 43687	IC L7808ABV
7922	9322 137 37687	IC L4931AB33
7953	9335 897 60215	TRA SIG SM BC857B
7954	9335 897 60215	TRA SIG SM BC857B
7956	9331 976 30126	TRA SIG BC547B
7957	9335 895 00215	TRA SIG SM BC807

NOTE: Code number for Standard components are not listed here, please refer to standard components catalogue.

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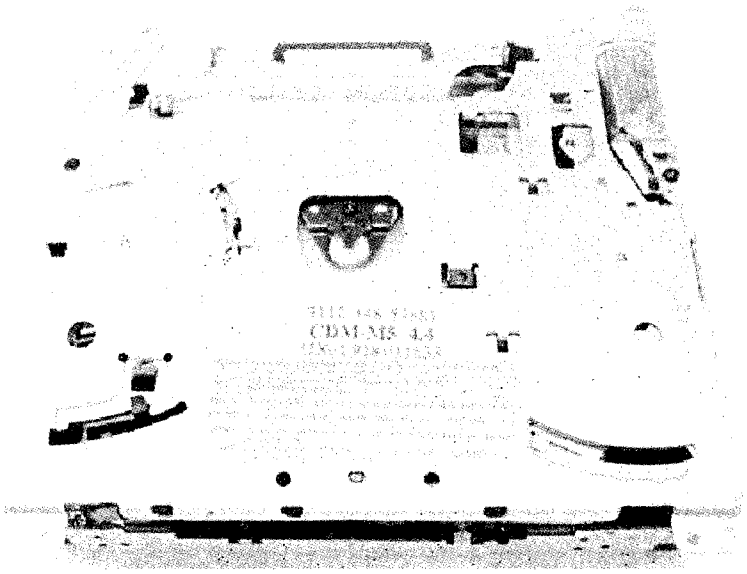
mannesmann
VDO

CD Module CDM-M5/4.1/4.4

12 V



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WARNINGS

DANGER
Invisible Laser radiation when open.
AVOID DIRECT EXPOSURE TO BEAM

ATTENTION
Static Sensitive Devices
Handle Only at Static
Safe Work Stations

1. GENERAL

The CDM-M5 is a full-logic µP- and servo-controlled CD module. The module is controlled by the headset via the standardized I²C bus. The mechanical part is the same for both versions; the table (see section 3) gives an overview of the different connector types, supply voltages and outputs.
The CDM-M5 has a so-called 'Pirouette' loading mechanism. This means that the CD is loaded and ejected with help of a roller which touches only the edge of the CD instead of the disc surface.
This guarantees an absolute scratch-free loading and ejecting of the CD.
Other built-in protections are against: 2nd disc insertion, 8cm disc insertion and mechanism damage when inserting a CD during power-off.
The CDM-M5/4.1 and CDM-M5/4.4 are mechanically equal to each other. The difference between both versions consists in the output: the CDM-M5/4.1 has an analogue output, whereas the CDM-M5/4.4 has a digital output.
Refer also to section 3.

2. TECHNICAL SPECIFICATIONS

Operating voltages	:	*Refer to table (section 3)*	
Crosstalk suppression	:	≥ 60dB	}
THD	:	≥ 55dB typ.	} - ONLY for CDM-M5/4.1
S/N ratio	:	≥ 87dB (A-weighted)	}
Bus interface	:	I²C	
Access times			
Start up	:	2 sec typ.	
Load to play	:	4 sec typ.	
Play to eject	:	4 sec typ.	
Operating temperature	:	-15°C....+65°C	
Operating angle	:	-10° ....+30°	
Weight	:	approx. 600g	

3. OVERVIEW OF CDM-M5 VERSIONS

Version	Control Connector	Audio / Data Connector	Supply Voltage V1	Supply voltage V2	Remarks
/4.1	14-pole AMP MICRO MATCH	Combined with Control connector	7.5 – 8.5VDC 8.0VDC nom.	3.1 – 3.6VDC 3.3VDC nom.	Analogue audio output
/4.4	12-pole AMP MICRO MATCH	Combined with Control connector	7.5 – 8.5VDC 8.0VDC nom.	3.1 – 3.6VDC 3.3VDC nom.	Digital S/P DIF output

For connector pin layouts, see further on in this manual.

4. MAINTENANCE

Remark: *all position numbers of the main assy are given as normal fonts; position numbers of the pick-up assy are underlined.*

4.1 Cleaning and lubrication

The CD module mechanism requires cleaning and lubrication after each repair. In other cases this is not necessary.

4.2 Cleaning with alcohol

- *Note: Use fluff-free Q-tips !*
- Turntable wheel pos. 14.
- Disc clamp assy pos. 2.
- Lens of pickup (laser) unit pos. 4.

4.3 Lubrication overviews

See section concerned further on in this manual.

5. CHECKS

5.1 Equipment required

- Test CD's:
  - SBC442 - 4822 397 30155
  - SBC444/444A - 4822 397 30245
  - Audio Signals disc1 SBC429
    - 4822 397 30184
  - A-BEX TCD721 (white scratch)
  - Philips 8A (double black dot)
  - Max. thickness - 4822 397 30275
  - Min. thickness - 4822 397 30276
  - Skew disc - 4822 397 30277
  - Eccentr. 200µm - 4822 397 30278
  - Max. radius - 4822 397 60141

The CD module should be tested while connected to a suitable radio set.

5.2 Access times

- Use the test CD SBC442.
- Maximum times should be:
  - 'Load to Play': 6 sec
  - Start up: 3 sec
  - Switch track1 → track 2: 2 sec
  - Switch track1 → track 20: 4 sec
  - Play → standby: 3 sec
  - Standby → eject: 3 sec
- If one or more times exceed the maximum value, check (gear) wheels pos. 5-9 + 51, feed gear assy pos. 10/11 and drive gear pos. 13 and replace the CD module if necessary. Check also the servo- and sledge (feed) motors (resp. pos. 3 and 5).

5.3. Black dot

- Use test CD SBC444A with simulated black dot of typ.1000µm.
- No 'hitching' may occur now during play.

5.4 Double black dot

- Use test CD Philips 8A with simulated black dots of 600 + 300 µm.
- No 'hitching' may occur now during play.

5.5 Information layer interruption

- Use test CD SBC444A with simulated interruption of typ. 1000 µm.
- No 'hitching' may occur now during play.

5.6 Simulated fingerprint

- Use test CD SBC444A with simulated finger-print (tracks 18 and 19).
- No 'hitching' may occur now during play.

5.7 'White' scratch

- Use test CD A-BEX TCD721 with a white scratch of typ. 1000 µm.
- No 'hitching' may occur now during play.

5.8 Eccentricity

- Use test CD with 200 µm eccentricity.
- No audible distortion, wow or flutter may be heard now.

5.9 Thickness

- Use the 'max.- and min. thickness' test CD's.
- The module should load these discs properly and no audible distortion, wow or flutter may be heard now.

5.10 Track attainability

- Use 'Audio signals' test CD.
- Track no. 99 should be reached without problems.

When one or more specifications mentioned in '**5.3**' -'**5.10**' are not met, check the sledge (feed) assy pos.5/6/10-13, spindle motor pos. 7 and pick-up unit pos. 4.
Replace the CD module if necessary.

For more information refer to the manual: 'General Check and Alignment Procedures' 4822 725 25456.

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6. DISASSEMBLY PROCEDURE

Important: *Before disassembling the CD module, lay the module with the pcb side up, unless otherwise noted. Use a 'clip' and put it on the flex foil.*
Close the solder bridge on the flex foil of the pick-up (laser) unit assy pos.4 of the drive assy pos. 80.
First the rear bracket pos.11 should be removed!

For re-assembling, follow the procedures in reverse order. Take care that the wires, cams etc. are in the right position again after re-assembling.
For the exact position of the parts, refer to the exploded views.
In the description hereafter, all position numbers which are valid for the CDM-M5/4.1 have normal fonts, those which apply to the CDM-M5/4.4, have **bold** fonts. Where only one position number is given, then this number is valid for the CDM-M5/4.1 and CDM-M5/4.4 as well. Position numbers of the pick-up unit parts are underlined.

6.1 CD pcb pos. 95 / 78

- Remove cable assy pos. 94 / **79**.
- Remove flexfoil of drive assy pos. 80 from the (pcb) connector.
- Unplug the cables of the spindle- and sledge motor of pos. 80 and the servo motor pos. 3.
- Remove the two screws pos. 38.
- Pull the left part of the pcb slightly backward, lift it and take the pcb out.

6.2 Front bracket assy pos.1

- First remove the CD pcb (see **'6.1'**).
- Remove the two fixation screws pos. 23.
- Loosen the three springs pos. 17 and 48 from the pivots of the bracket.
- Pull off the damper from the pin of pos. 80.
- Clean the pins.
- Take front bracket away.
- When re-assembling, put some spirit on the damper fixation pivots to make it easier to fix the damper.
- *Use new springs for pos. 17 and 48!*

6.3 Rear bracket pos. 11

- Remove the two fixation screws pos. 23.
- Loosen the adhesive tapes and remove the servo motor cable wires.
- Pull off the two dampers from the pins of pos. 80.
- Clean the pins.
- Take rear bracket away.
- When re-assembling, put some spirit on the damper fixation pivots to make it easier to fix the dampers.

6.4 Drive assy pos. 80

- First remove the pcb and brackets as described in **'6.1'**, **'6.2'** and **'6.3'**.
- Remove the protection rod pos. 41.
- Unhook the two springs pos. 22.
- Supply the servo motor with a DC voltage of approx. 3...5V ('+' to motor terminal marked by red dot), to have the motor run so that command slider pos. 26 moves backward; and hold roller pos. 8 andpush guiding / lever pos. 14/15 and press touch lever pos. 39 simultaneously.
- Alternative method:
  Remove *the* servo motor by removing fixation screw pos. 23 and pulling the worm pulley side upwards; thereafter turn swing wheel pos. 51 until it grasps in the cam of pos. 26; hold roller pos. 8 and the guiding / lever pos. 14/15 and press touch lever pos. 39 simultaneously; turn pos. 8 anti-clockwise until locking left pos. 27 moves to the right.
- As soon as pos. 27 moves to the right, the drive assy can be taken out.
- When re-assembling, *use new springs for pos. 17, 22 and 48!*

>> *Refer to the next section for the spring mounting procedure.*

Important: *After re-assembling,* ***DON'T FORGET*** *to remove the solder bridge from the pick-up unit pos. 4!*

7. SPRING MOUNTING PROCEDURE

Important notes:

- *Take care of a proper ground connection of the CDM module during all actions for a good ESD protection*
- *Mark the change and the right CDM module mounting position on the top side of the CDM module!*

7.1 Disassembly / Reassembly sequence

- Pull out the rear suspension spring by using a pair of tongs *(figures i and ii)*.
- Unscrew the two pcb fixation screws and swing the pcb 180° above the rear bracket *(figures iii and iv)*.
- Pull out the front suspension – and the auxiliary springs by using a pair of tongs (in the same way as it is shown for the rear suspension spring in figure ii) *(figure v)*.
- Hang up the front suspension – and the auxiliary springs in the hooks of the drive assy pos. 80 by using a pair of sharp tweezers (type: EREM 00 d SA) *(figures vi and vii)*.
- Spread of the lever left and the driving lever by using a CD ('Max. thickness' test CD 4822 397 30275 to be preferred) *(figure viii)*.
  Note: *This is necessary because otherwise there exists the risk of damaging the pcb switches !!*
- Swing the pcb and assemble it in the slots in the top cover *(figure ix)*.
- Pull out the CD and assemble the pcb in the final position by re-inserting the two pcb fixation screws *(figures iii and x)*.
- Hang up the front suspension – and the auxiliary springs in the hooks of the front bracket by using a pair of sharp tweezers (type: EREM 00 d SA) *(figures vi and vii)*.
- Hang up the rear suspension springs in the hooks of the top cover and drive assy by using a pair of sharp tweezers (type: EREM 00 d SA) *(figures vi and vii)*.

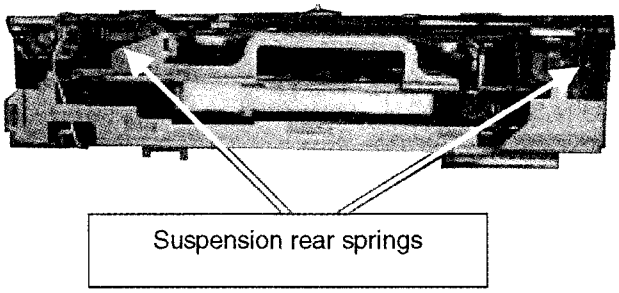

Figure i

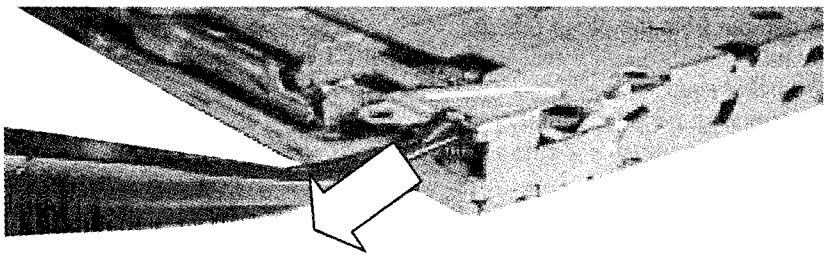

Figure ii

Pull out the rear suspension spring by using a pair of tongs.

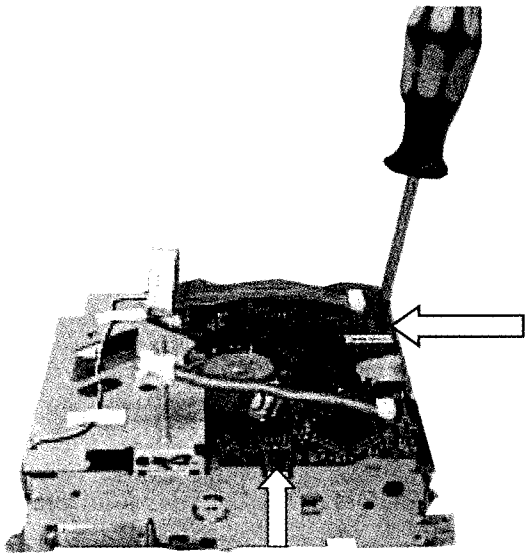

Figure iii

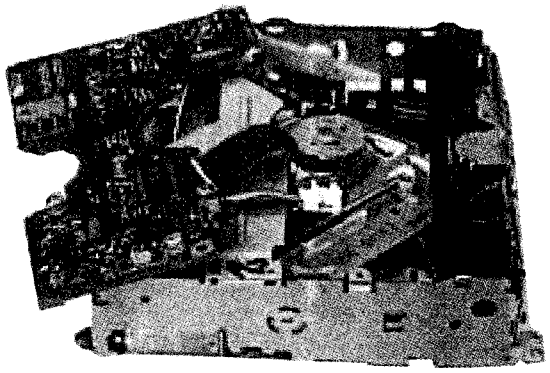

Figure iv

Unscrew the two pcb fixation screws and swing the pcb 180° above the rear bracket.

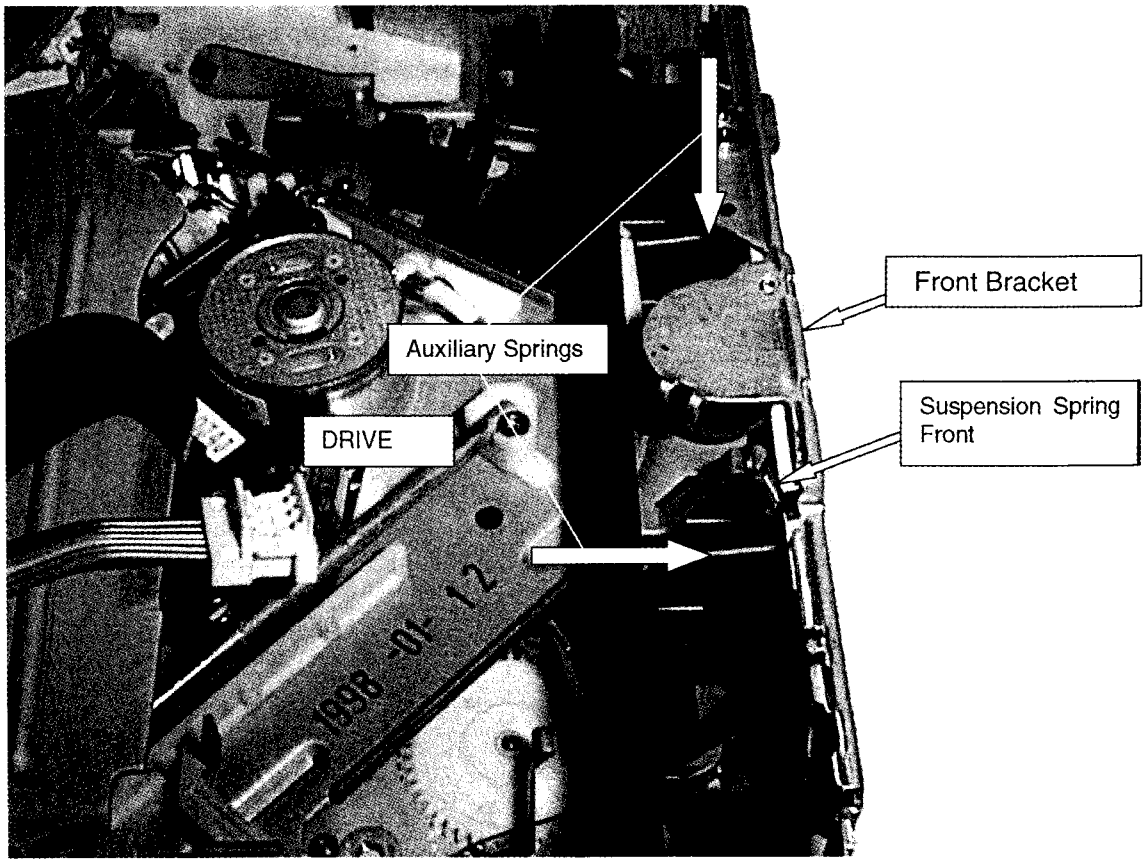

Figure v

Pull out the front suspension- and the auxiliary springs by using a pair of tongs (in the same way as it is shown for the rear suspension spring in figure ii).

First: Hang up the new springs.

Figure vi

Second: Slide them into final position.

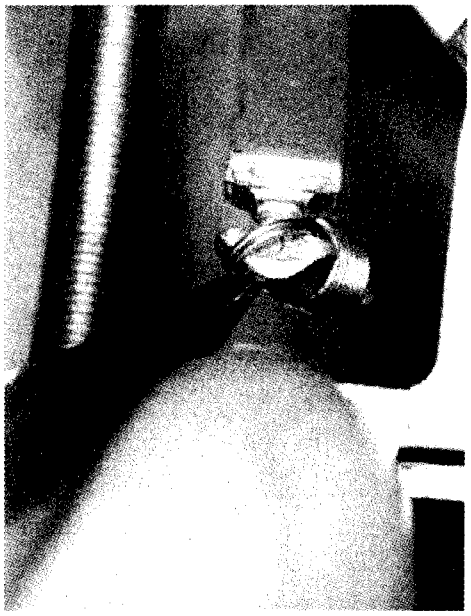

Figure vii

Hang up the front suspension - and the auxiliary springs by using a pair of sharp tweezers (type: EREM 00 d SA).

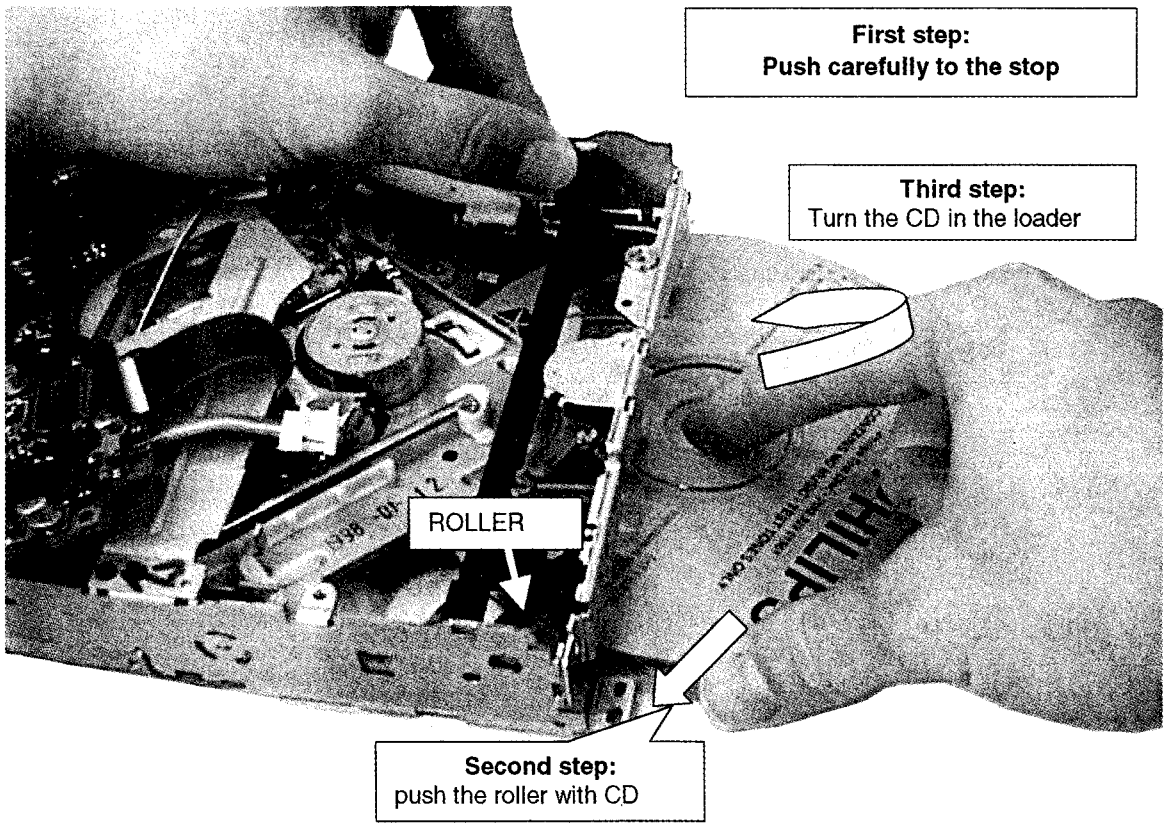

Figure viii

Spread of the lever left and the driving lever by using a CD ('Max. thickness' test CD 4822 397 30275 to be preferred).

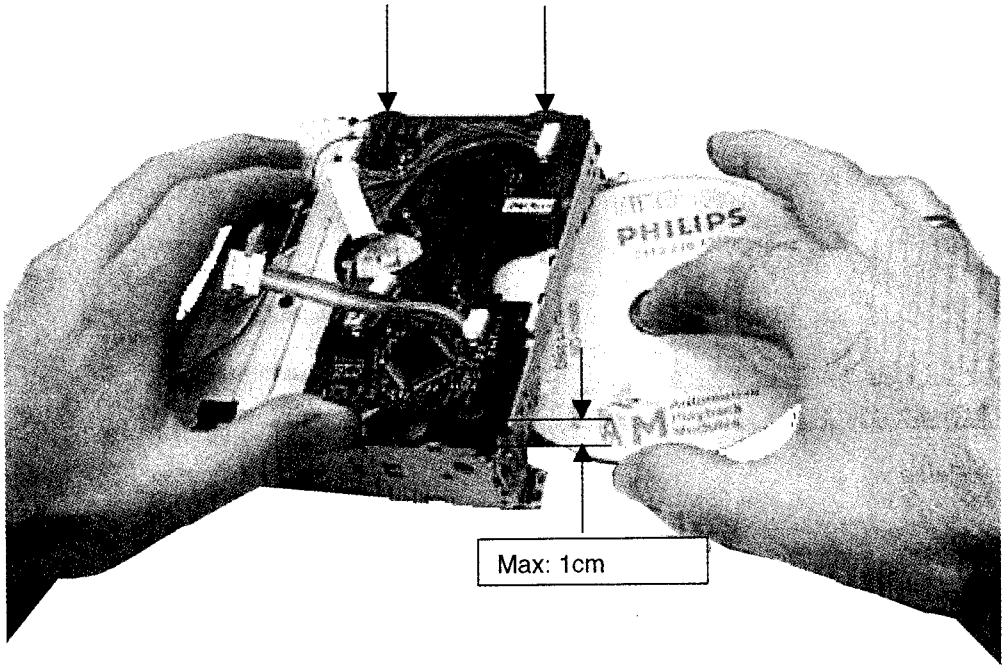

Figure ix

Swing the pcb and assemble it in the slots in the top cover.

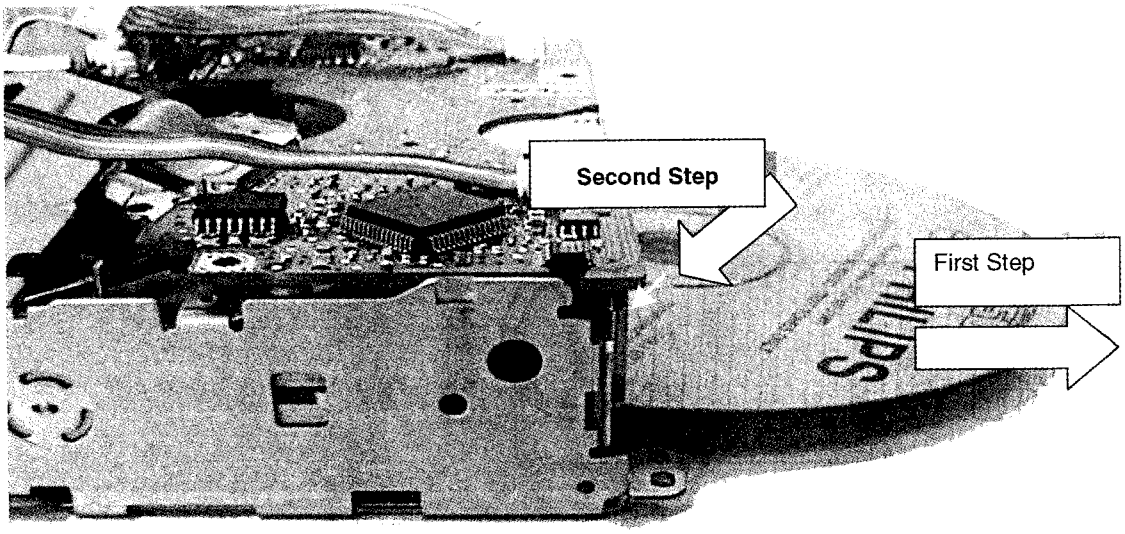

Figure x

Pull out the CD and assemble the pcb in the final position.

7.2 Service kit 4822 310 11146

Springs for mounting from –10 ... +30 degrees

1 x front suspension spring

Number of turns : 9.5

Diameter of wire : 0.24 mm.

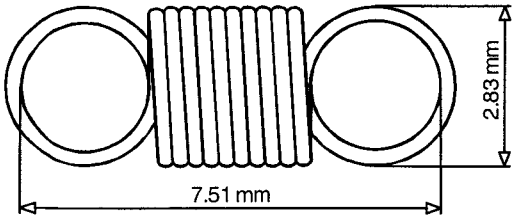

Figure xi

2 x front auxiliary springs

Number of turns : 43.75

Diameter of wire : 0.22 mm.

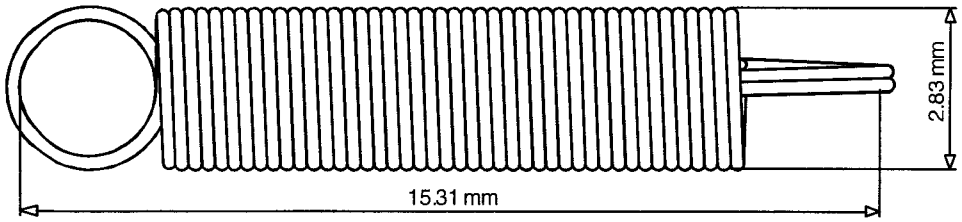

Figure xii

2 x rear suspension springs

Number of turns : 24

Diameter wire : 0.25 mm.

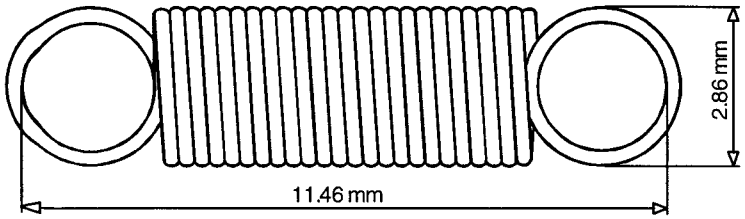

Figure xiii

8. CONNECTIONS

8.1 Connector CDM-M5/4.1

14 POLE CONNECTOR

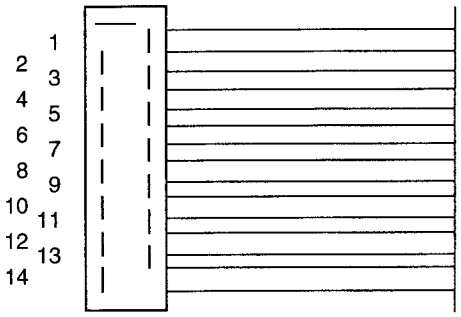

Figure xiv

Pin	Signal
1	INSERT SWITCH
2	POWER GROUND
3	V1(+8V)
4	SERIAL CLOCK - SCL
5	SERIAL DATA - SDA
6	BUS REQUEST - CRQ
7	V2(+3.3V)
8	µP RESET – CRST
9	GROUND
10	NOT USED
11	DIGITAL GROUND
12	AUDIO OUT LEFT
13	AUDIO GROUND
14	AUDIO OUT RIGHT

8.2 Connector CDM-M5/4.4

12 POLE CONNECTOR

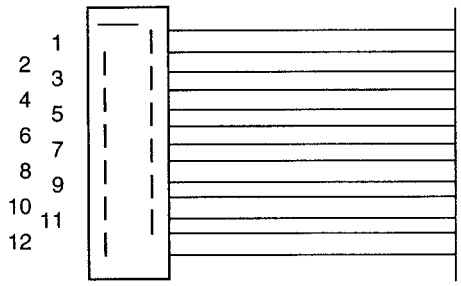

Figure xv

Pin	Signal
1	INSERT SWITCH
2	POWER GROUND
3	V1(+8V)
4	SERIAL CLOCK – SCL
5	SERIAL DATA – SDA
6	BUS REQUEST – CRQ
7	V2(+3.3V)
8	µP RESET – CRST
9	GROUND
10	S/P DIF
11	SIGNAL GROUND
12	NOT USED

9. BLOCK DIAGRAM

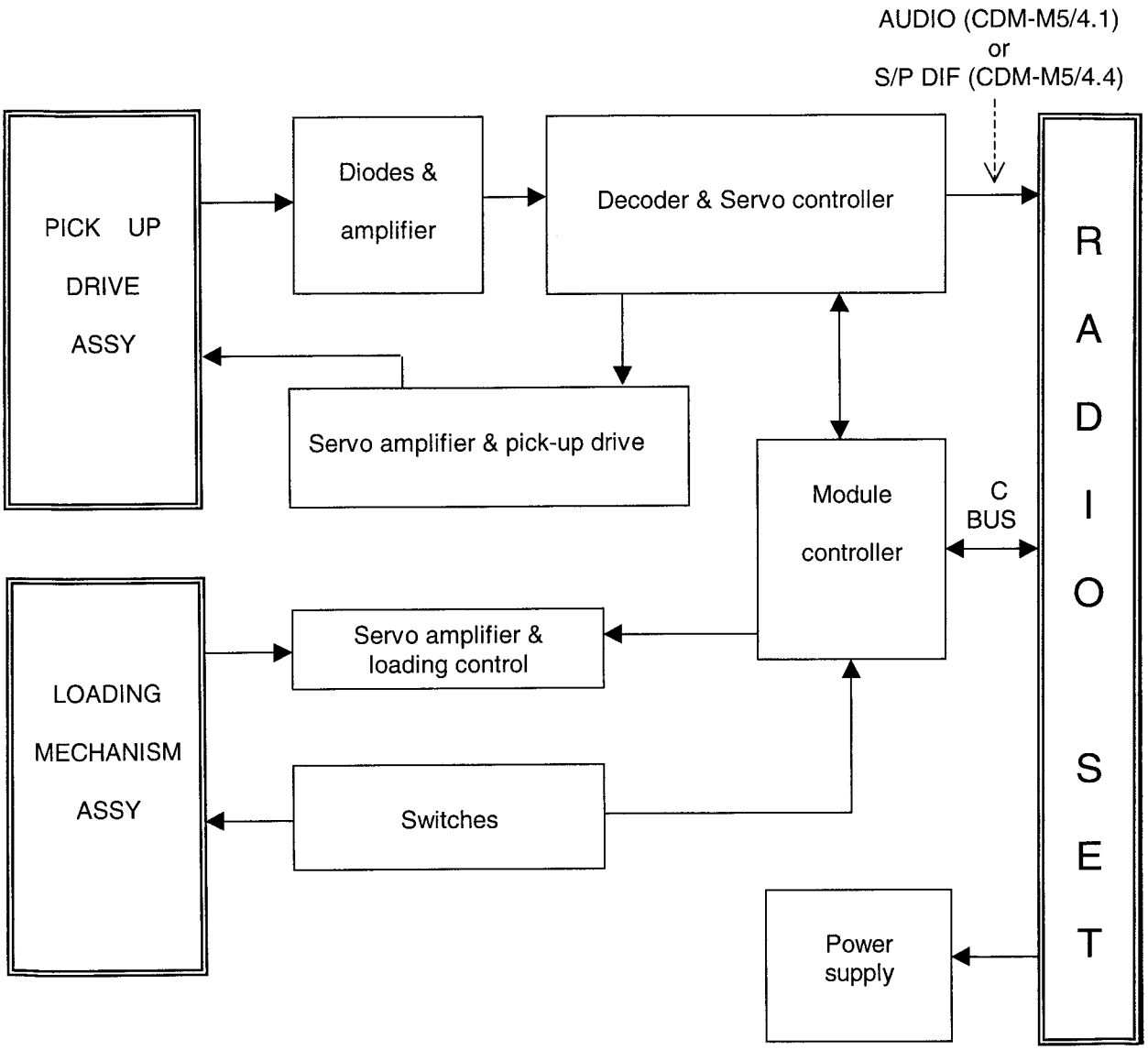

Figure xvi

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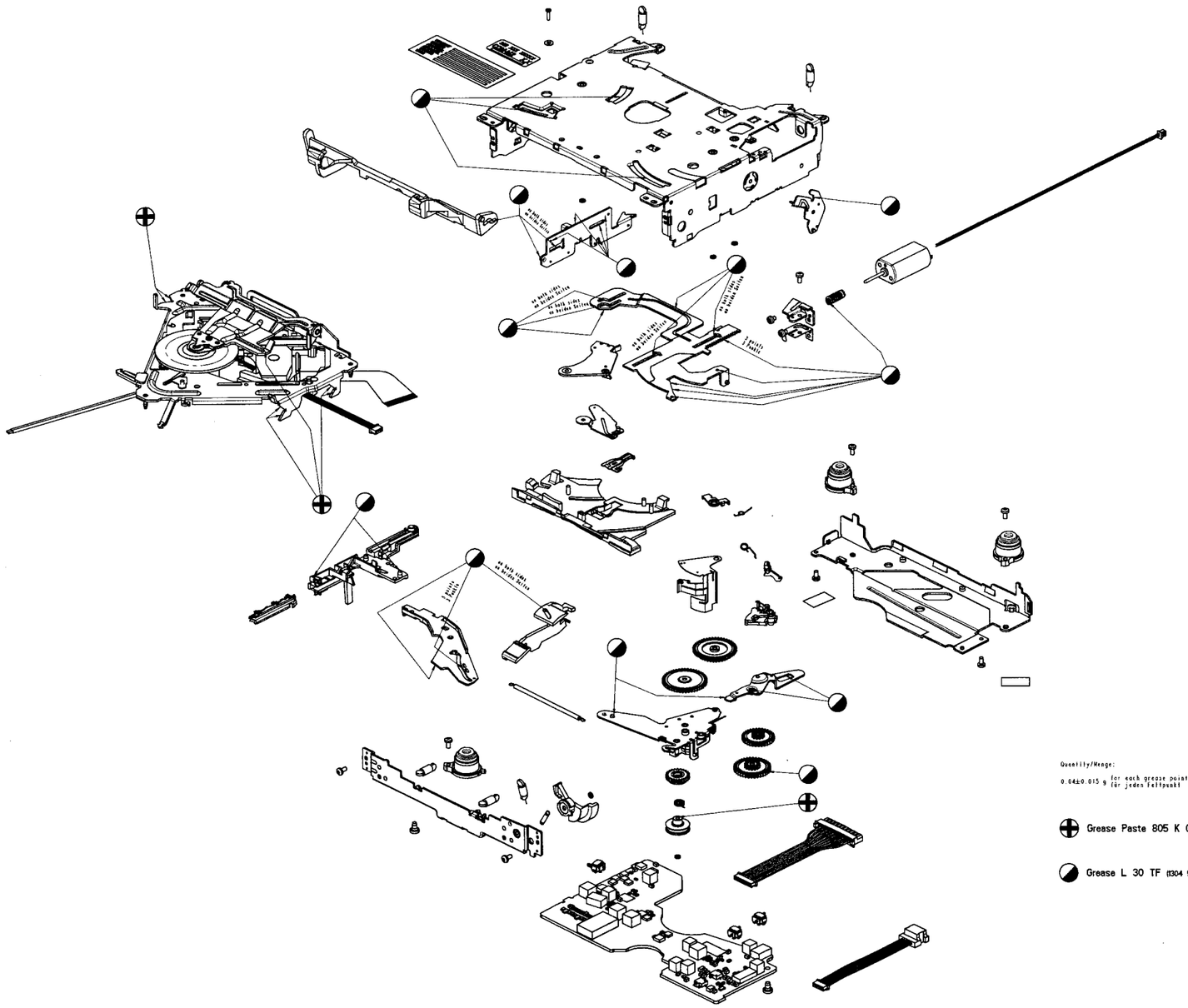
10. LUBRICATION OVERVIEWS

Note: *The CD module mechanism and drive assy do not require periodic cleaning and lubrication, <u>only</u> after repair !!*

10.1 Lubrication overview CD module mechanism



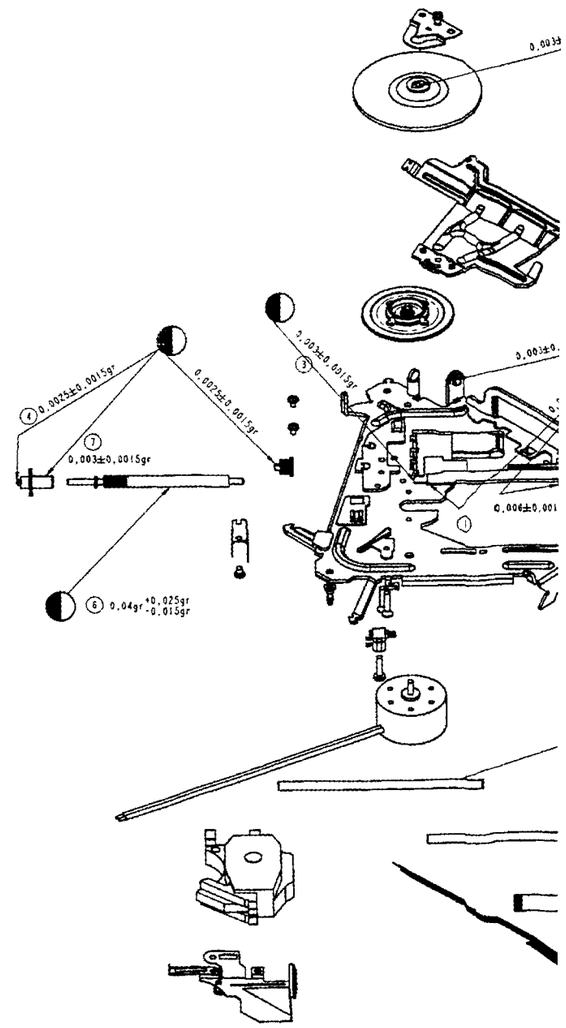
Quantity/Menge:

0.04±0.015 g for each grease point / für jeden Fettpunkt

Grease Paste 805 K Gleitmo (1312 505 03011)

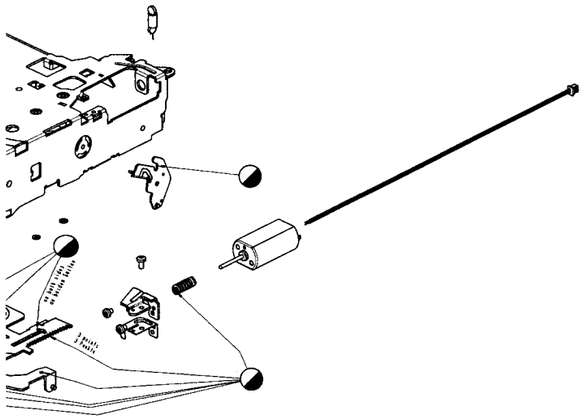
Grease L 30 TF (1304 523 17601)

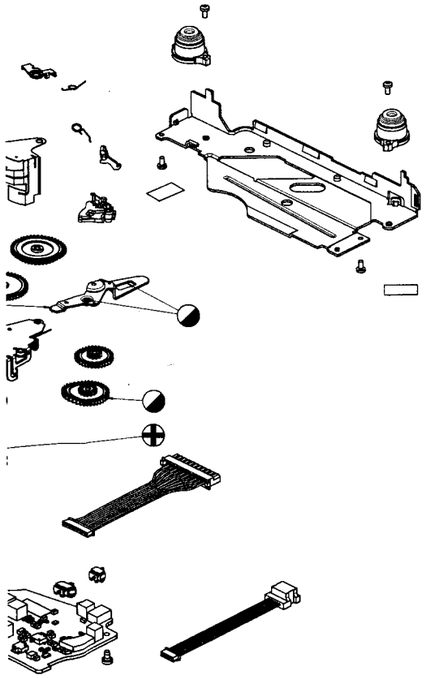
10.2 Lubrication overview drive assy

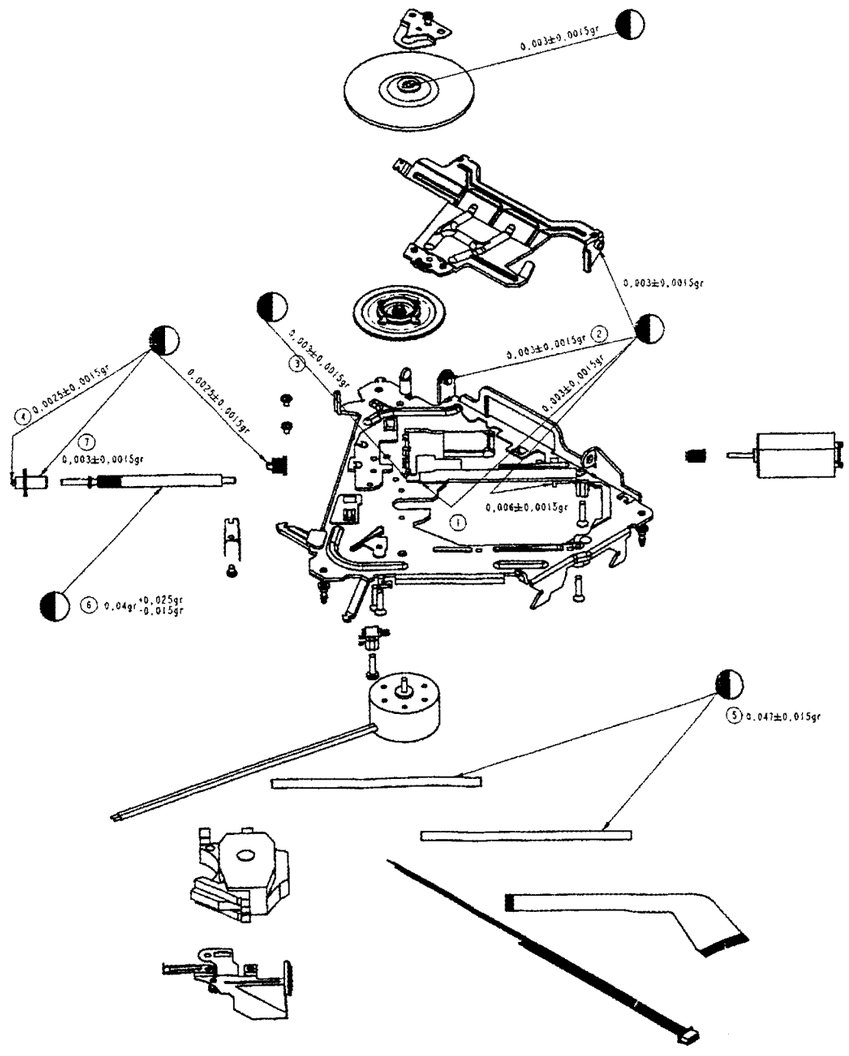


lubrication, only after repair !!

10.2 Lubrication overview drive assy







① Bearing point of the feed gear assy on the side of the sledge motor.
② The grease is put on the bearing point of the pressure plate.
③ The axle of the drive gear.
④ The grease is put on the bearing point of the feed gear assy. on the side of the sledge motor (①)
⑤ Instead of the OPU we grease the surface of the main pick shafts by using a special equipment.
⑥ We grease the surface of the feed gear. In this way the grease disperses better on the length of the feed gear.
⑦ After mounting

Quantity/Menge:

0.04±0.015 g for each grease point
für jeden Fettpunkt

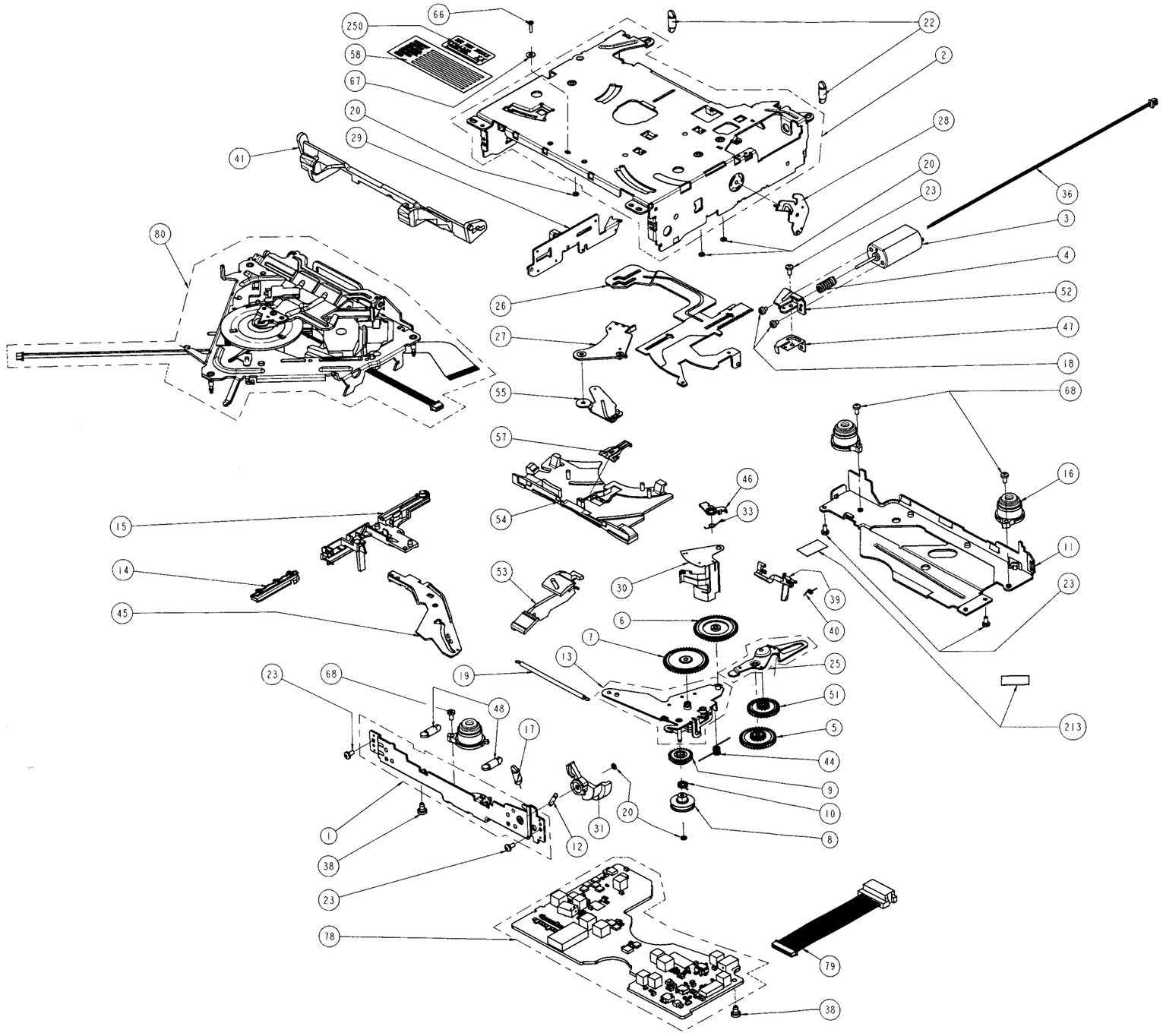
⊕ Grease Paste 805 K Gleitmo (1312 505 03101)

◑ Grease L 30 TF (1304 523 17601)

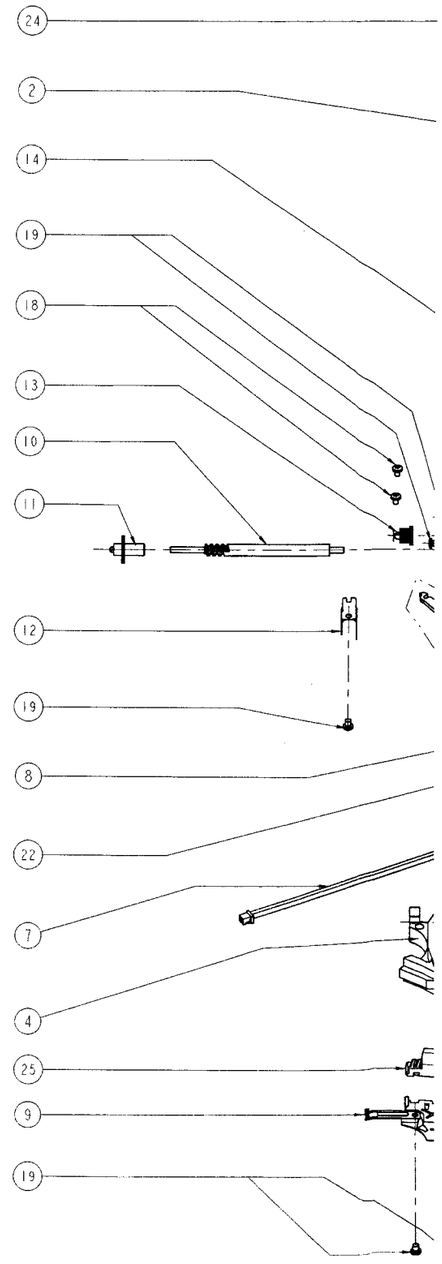
◑ Molykote PG - 602 (1304 501 09801)

11. EXPLODED VIEWS

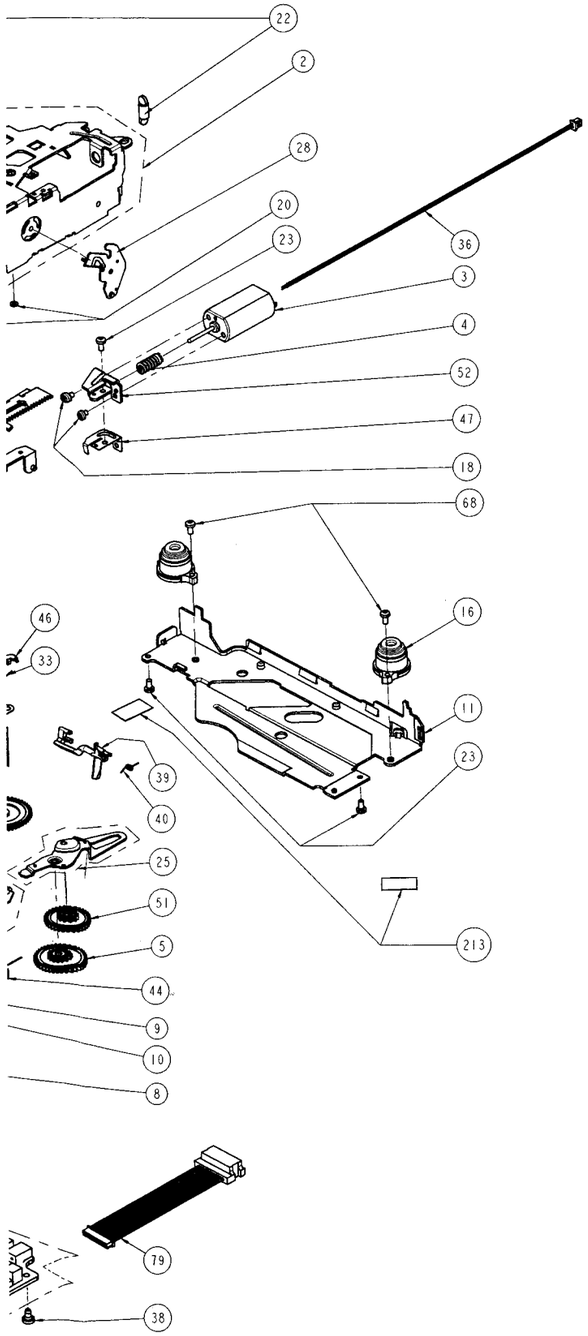
11.1 Exploded view CD module mechanism

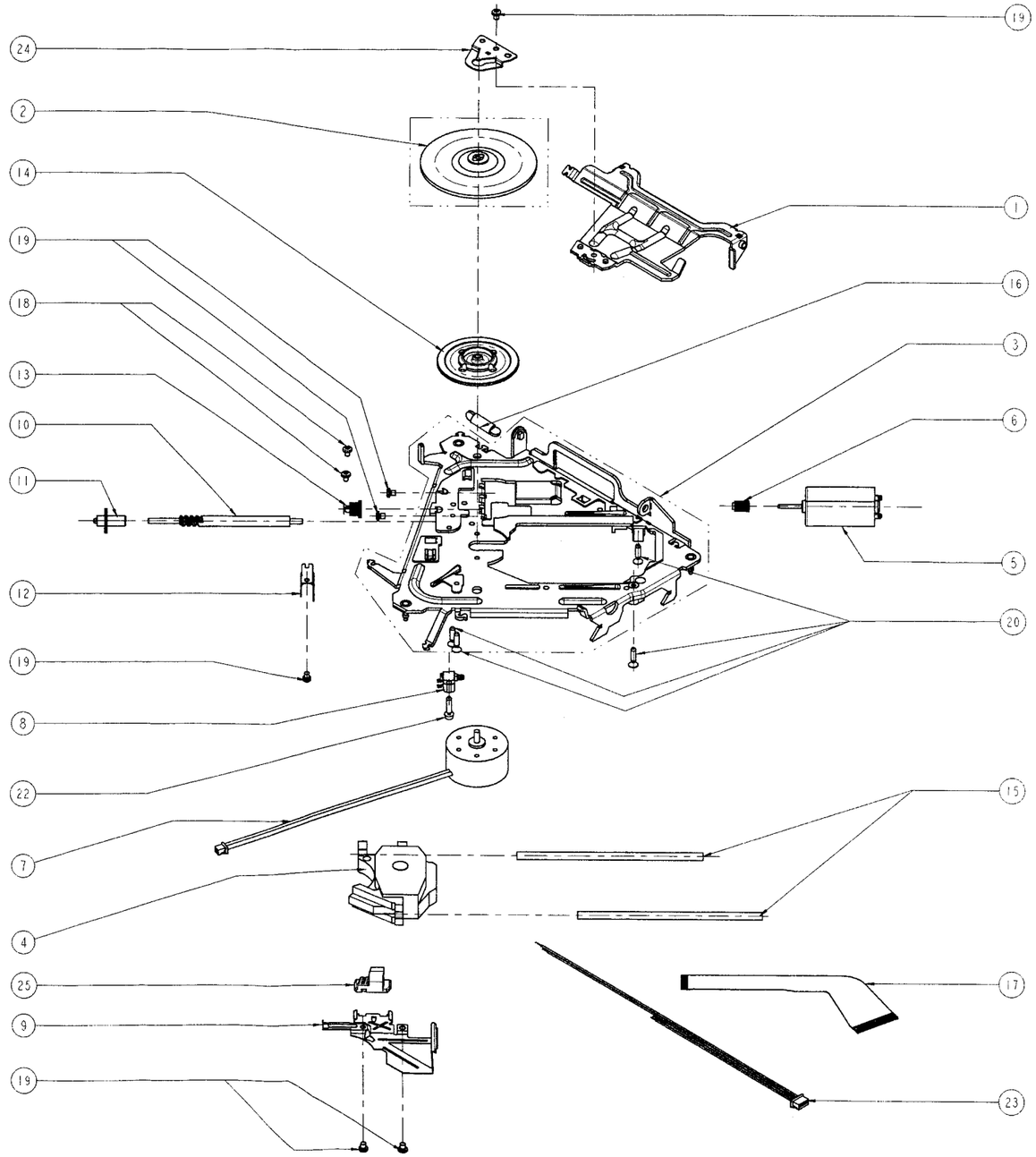


11.2 Exploded view drive assy



11.2 Exploded view drive assy





12. PARTS LISTS

Notes: *The CDM-M5 is subdivided into the following main parts:*
CD loader mechanism, drive (pick-up) unit, pcb and cable set.
However, the detailed exploded views both of the changer mechanism and the pick-up unit are inserted for completeness purposes and to clarify the maintenance – and disassembly procedures.

12.1 Mechanical parts

14	3112 658 10310	Loader assy complete
16	4822 529 10434	Damper assy
17/22/48	4822 310 11146	Spring kit for drive
20	4822 532 52348	Isolation ring
23	4822 502 12955	Screw M2x4
38	4822 502 14055	Screw M2.5x5
80	3112 358 24691	Drive assy
	4822 691 10792	CDM-M5/4.1 complete (with pcb / packed)
	3112 358 69600	CDM-M5/4.4 complete (with pcb / packed)

12.2 Electrical parts

78	3112 338 53160	PWB assy CDM-M5/4.4 digital output
79	3112 310 26120	Cable assy CDM-M5/4.4, 12-pole AMP Micromatch
94	3112 651 00051	Cable assy CDM-M5/4.1, 14-pole AMP Micromatch
95	3112 658 00093	PWB assy CDM-M5/4.1 analogue output

12.3 Accessories

(350)	4822 390 10143	Gleitmo 805K (80gr) lubrication paste
(351)	4822 390 10134	L30TF grease